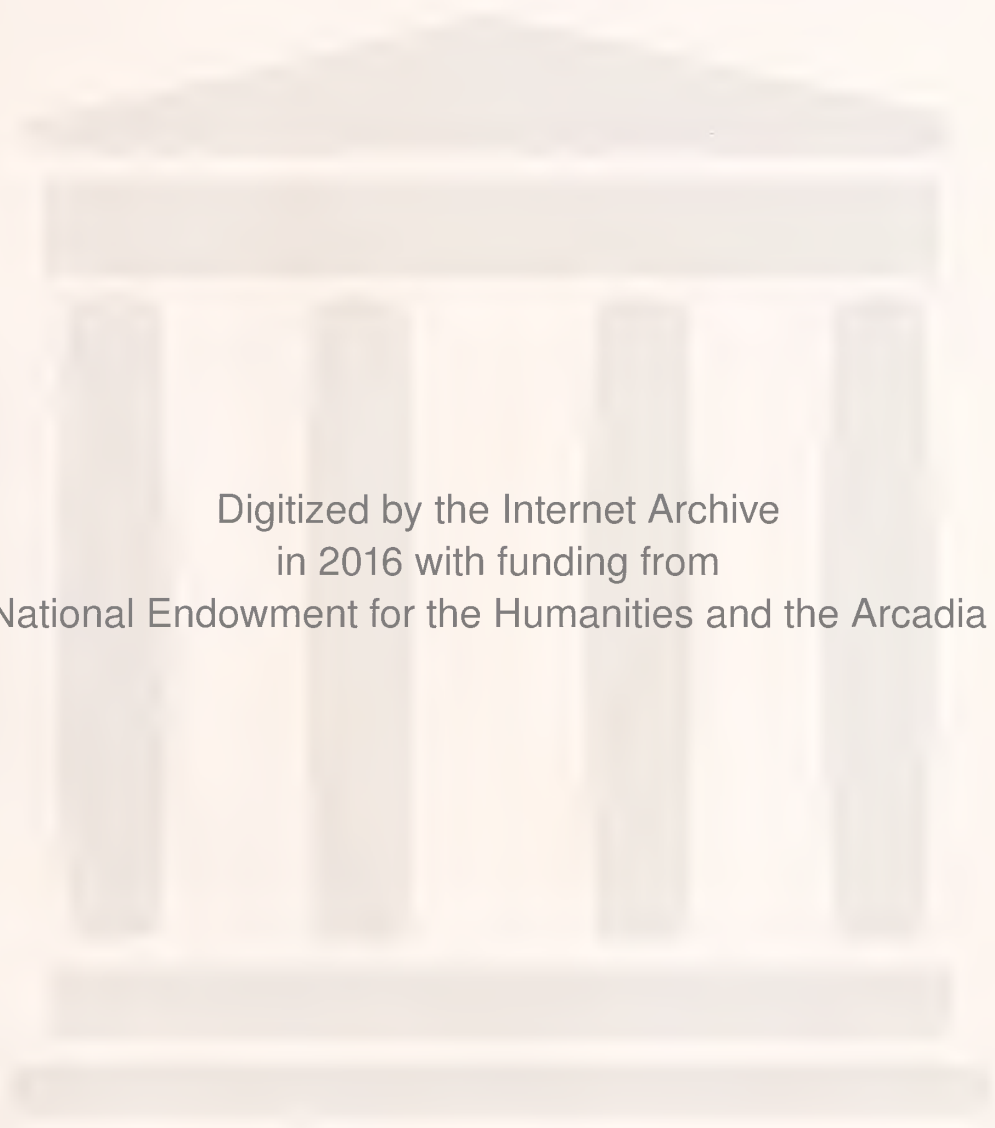


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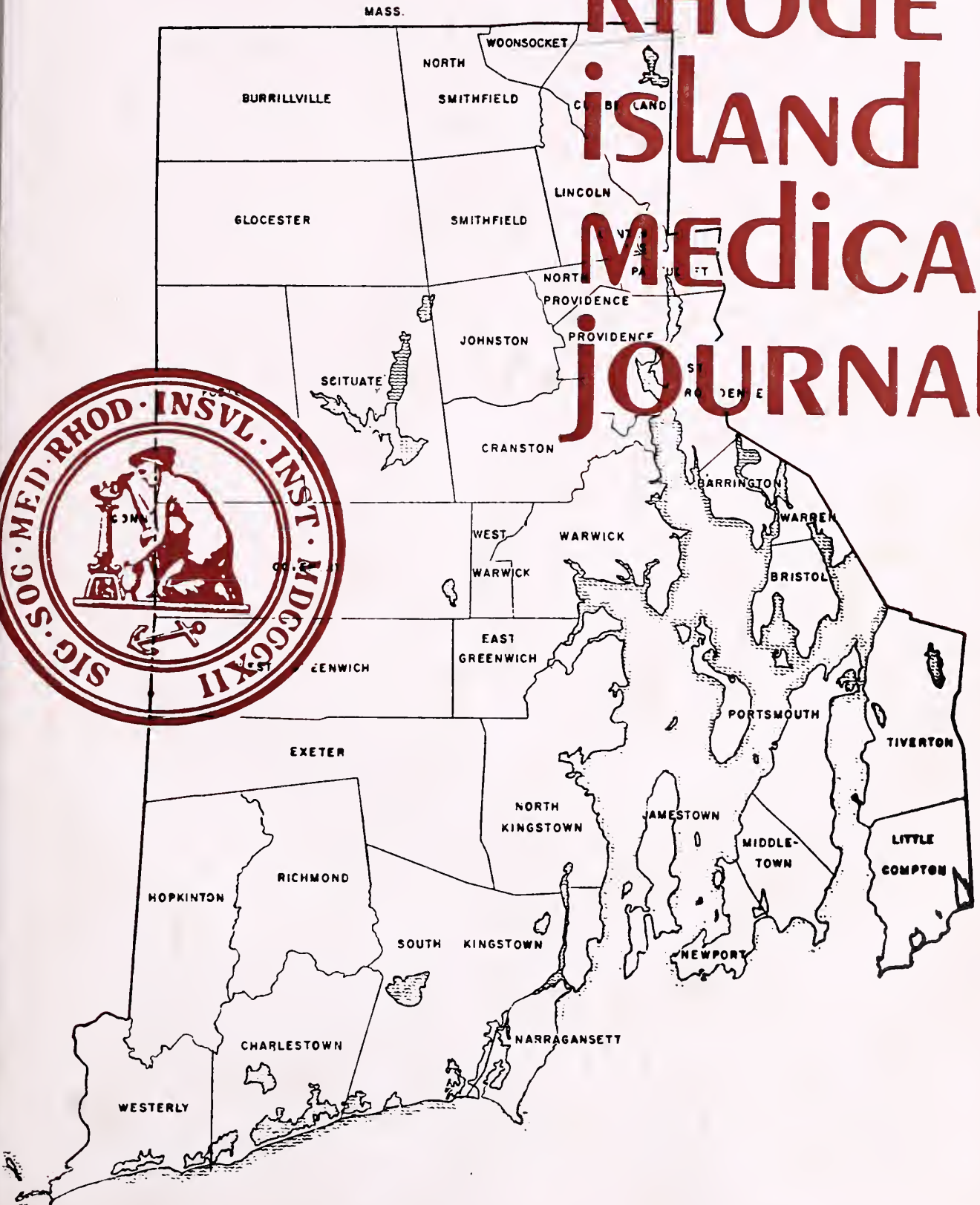
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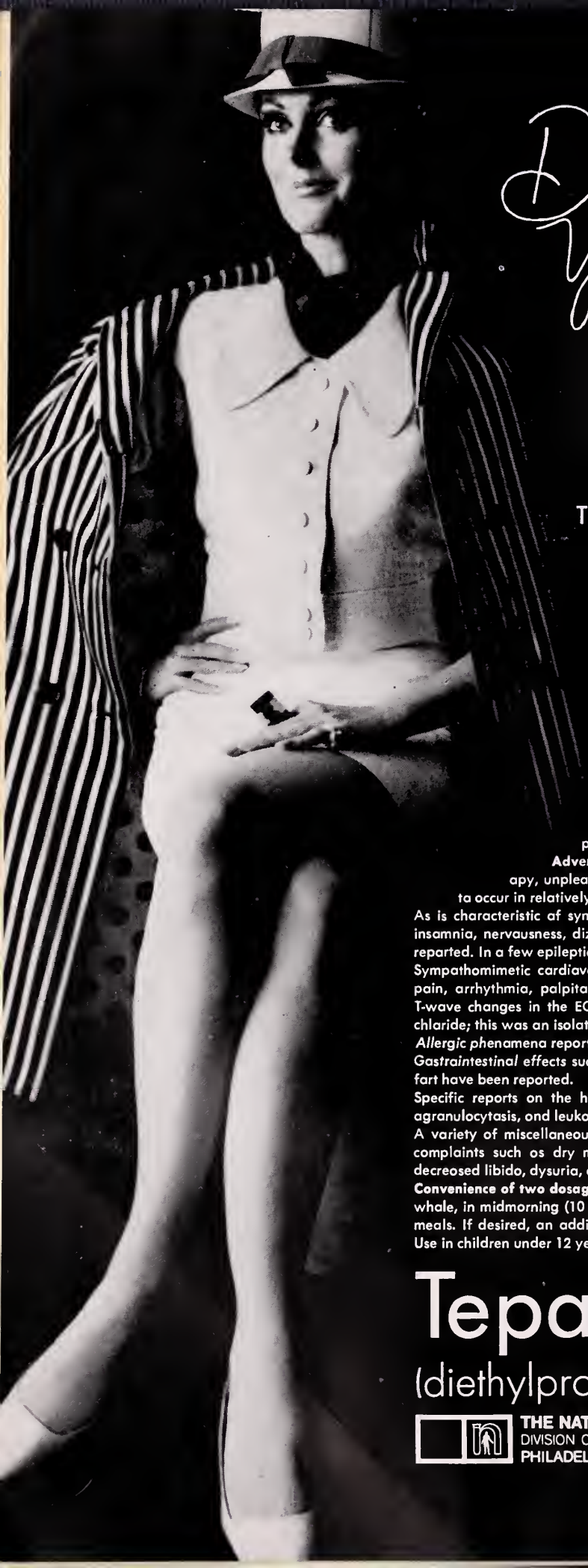


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Rhode island Medical Journal



SYMPOSIUM ON CARDIOVASCULAR DISEASE . . . PAGE 375



*Dear Doctor,
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slimmer!*

TEPANIL—the right start in support of the weight-control program you recommend. It reduces the appetite. Doesn't kill it. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation. Because **TEPANIL** works on the appetite, not on the "nerves."

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

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Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence.

As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported.

Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others.

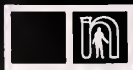
Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported.

Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia.

A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: **TEPANIL Ten-tab** tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); **TEPANIL**: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in mid evening to overcome night hunger. Use in children under 12 years of age is not recommended.

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Lactinex has been shown to be useful in the treatment of gastrointestinal disturbances, and for relieving the painful oral lesions of fever blisters and canker sores of herpetic origin.^{1,2,3,4,5,6,7,8}

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

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Baltimore, Maryland 21201

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References:

- (1) Siver, R. H.: CMD, 21:109, September 1954.
- (2) Frykman, H. H.: Minn. Med., 48:19-27, January 1955.
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- (7) Abbott, P. L.: Jour. Oral Surg., 19:305-306, July 1961.
- (8) Rapoport, L. and Levine, W. I.: Jour. Oral Surg., Oral Med. & Oral Path., 20:591-593, November 1965.



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Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—*anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani.* Skin—*maculopustular and erythematous rashes; a rare case of exfoliative dermatitis has been reported.* Photosensitivity; onycholysis and discoloration of nails (rare). Kidney—*rise in BUN, apparently dose related.* Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—*urticaria, angioneurotic edema, anaphylaxis.* Teeth—*dental staining (yellow-brown) in children of mothers given the drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood.* Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in a bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, food and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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The RHODE ISLAND MEDICAL JOURNAL

Vol. LII, No. 7

July, 1969

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OPEN HEART SURGERY BY A SIMPLIFIED TECHNIQUE

. . . *Disposable Oxygenator Using Dextrose and Water Found
Acceptable in 25 Cases* . . .

JOHN YASHAR, M.D. and JAMES J. YASHAR, M.D. . . . 375

IMPORTANCE OF THE FIRST HEART SOUND IN CARDIAC DIAGNOSIS

. . . *Art of Auscultation Enhanced By Understanding of
Mechanisms Of Acoustical Phenomena* . . .

ROBERT C. LITTLE, M.D. . . . 380

Progress Notes —

PRINCIPLES OF THERAPY IN CEREBRAL VASCULAR DISEASE

. . . *Treatment Program Should Be Based On Appropriate
Studies And Tested Techniques* . . .

MARK L. DYKEN, M.D. . . . 384

PHYSICAL MEASUREMENTS AT AGE TWENTY-TWO AND NINETY-FOUR COMPARED

. . . *Rare Opportunity Presented To Make Comparison In A
Healthy Male* . . .

ROBERT V. LEWIS, M.D. . . . 398

FLURANDRENOLONE TAPE THERAPY

. . . *Represents A Definite Advance In The Management Of Certain
Cutaneous Disorders* . . .

FRANCESCO RONCHESE, M.D. . . . 389

WHERE DO WE GO? WHAT DO WE DO?

. . . *Every Child Has An Inherent Right To The Best In Health Care* . . .

MEYER SONIS, M.D. . . . 391

HEALTH AND WELFARE LEGISLATION ENACTED BY THE RHODE ISLAND GENERAL ASSEMBLY, JANUARY SESSION, 1969. . . . 363

EDITORIALS

Is Nursing Relevant? . . . 393

Adequacy of Psychiatric Treatment . . . 393

Medical Writing . . . 394

Undone By Under-Done Meat . . . 395

Wouldn't It Be Wonderful? . . . 395

Parasitic Disease Drugs Available at NCDC . . . 395

DEPARTMENTS

Book Reviews . . . 406

Edalogy . . . 358

Peripatetics . . . 369

Through the Microscope . . . 399

MISCELLANEOUS

Ten Clinical Commandments . . . 371

What Price Social Security? . . . 372

Edalogy . .

(Ethnic Medicine)

GASTRIC CANCER VIRTUALLY NONEXISTENT IN JAPANESE AINU

Not a single case of gastric carcinoma was found in a six-year study of the Ainu inhabitants of four villages in Japan.

Results of the study were reported by Prof. Masayoshi Namiki and co-workers of Hokkaido University Medical School, who said they did not find gastric ulcer among the Ainu until the last year of the study (1967), when a small ulcer was seen in a 65-year-old man. The incidence of polyps and gastritis also was very much less than in the regular Japanese, they reported.

The Ainu are an indigenous race, with light-colored skin and features of a European cast and a primitive culture, who live in part of Hokkaido and Karafuto.

* * *

... Medical Tribune, Feb. 29, 1969 CARCINOMA OF CERVIX IN INDIANS OF SOUTHWEST

Analysis of Pap smears from 18,000 women in New Mexico and Arizona indicates that it is girls who get pregnant while young who face increased risk, not necessarily because of their early sexual activity.

The incidence of cervical cancer among Indian women in the study — mostly Navajos — is less than half that of comparable white groups. Early intercourse, multiple pregnancies, noncircumcised partners, and poverty are all prevalent in the Indian population, according to Dr. Scott Jordan, assistant professor of pathology at the University of New Mexico School of Medicine in Albuquerque.

The incidence of suspicious Pap smears was 5.8 per thousand among the Indian women, 11.5 for Spanish-Americans, and 9.4 for Anglos (defined as Caucasians with non-Spanish surnames). Histologic diagnosis showed 3.3 cases of cervical cancer per thousand versus 7.9 in the non-Indian groups. Most of the women were in their twenties or thirties.

Anthropologist Dr. Kenneth Morgan noted that the Indians tended to have had their first and second babies later than the non-Indians. Although coitus begins early, the Indian girl does not conceive, apparently because of a transient period of adolescent sterility, perhaps racially, perhaps nutritionally, determined. Similar periods of adolescent sterility have been observed in isolated groups of both Mongoloid and Caucasian ancestry.

... Medical World News, March 28, 1969

* * *

HEIGHTS AND WEIGHTS OF INDIAN AND ESKIMO CHILDREN ON JAMES BAY AND HUDSON BAY

The heights and weights of 263 Eskimo school children from the east coast of Hudson Bay, 754 Cree Indian children from the James Bay area, and 119 Mohawk children in Southern Ontario are compared. In general, the Mohawk children were taller and heavier than the Crees who were taller and heavier than the Eskimos. A study of height/weight relationships and paired comparisons of Indian and Eskimo children living in the same settlement provided some evidence that the differences in height and weight between the Eskimos and Cree Indians predominantly racial or genetic.

... Partington, M. W., and Roberts, N.: Canad. Med. Assoc. J. 100:502, March 15, 1969

* * *

RACIAL INCIDENCE OF KAPOSI'S SARCOMA

Kaposi's sarcoma (idiopathic multiple hemorrhagic sarcoma) is a neoplasm of uncertain causation. The occurrence of this tumor in the absence of cutaneous manifestations is extremely rare. Kaposi's sarcoma is usually thought of as being more common among older men of Jewish and Italian extraction, but it has been found in nearly all racial and ethnic groups. While reports of this neoplasm in American Negroes are uncommon, it is of interest that it is a major neoplasm among the Bantu of South Africa, and it has been claimed that Kaposi's sarcoma accounts for nearly 10 per cent of all malignancies in Negroes of the Congo. In these geographic locations its distribution and incidence have suggested a similarity with Burkitt's lymphoma, a disease of the reticuloendothelial system in which oncogenic viruses of the herpes type (EB virus) are believed to play an important role.

... Siegel, et al.: JAMA 207:1495, Feb. 24, 1969

* * *

RHEUMATOID ARTHRITIS AND ANKYLOSING SPONDYLITIS IN BRITISH COLUMBIA INDIANS

In the adult Haida Indians of British Columbia the prevalence of definite rheumatoid arthritis is similar to that reported in other population groups. A very high prevalence of ankylosing spondylitis was found in the adult Haida Indians. The possibility of a high incidence of juvenile rheumatoid disease in Indian children is raised.

... Hill, R. M., and Robinson, H. S.: Canad. Med. Assoc. J. 100:509, March 15, 1969

* * *

GLUCOSE-6-PHOSPHATE DEHYDROGENASE DEFICIENCY IN THE PHILIPPINES: NEW VARIANT — G6PD PANAY

A new variant of glucose-6-phosphate dehydrogenase (G6PD) from the erythrocytes of a native of the island of Panay, one of the Philippine islands is reported. It is possible that this is the prevalent variant causing G6PD deficiency in the Philippines or even in wider areas of southeast Asia. It is also possible that this is just one expression of a remarkable degree of G6PD heterogeneity in that part of the world. The designation "G6PD Panay," in accordance with current rules of nomenclature, is proposed.

... Fernandez, M. N., and Fairbanks, V. F.:
Mayo Clin. Proc. 43:645, Sept. 1968

* * *

TUBERCULOSIS IN INDIAN CHILDREN

Two hundred and thirteen Indian children with primary pulmonary tuberculosis were treated between 1941 and 1955. Survivors were followed-up until 1967; 165 children did not receive any antimicrobial therapy, 90 subsequently developed one or more tuberculous complications, and 18 died of tuberculosis. Of the 48 children who received antimicrobials, only three developed complications and none died as a result of the disease. The most common forms of tuberculosis were adult-type pulmonary tuberculosis, pleurisy with effusion, and cervical adenitis. Comparison of these findings with those in white children with primary tuberculosis reveals that the outlook in Indian children is much more serious.

... Galbraith, J. D., et al.: Canad. Med. Assoc.
J. 100:497, March 15, 1969

* * *

ENDEMIC GOITER AND ENDEMIC CRETINISM IN THE ANDEAN REGION

The prevalence of endemic goiter in eight rural Andean villages was analyzed in relation to iodide deficiency, thyroid function, altitude, neural and motor dysfunction, and a variety of social and economic variables. Up to 54 per cent of the population in certain villages had goiter, and neural motor abnormalities characteristic of cretinism were present in up to 10 per cent of the population. All villages with prevalence of goiter had severe iodine deficiency. Intercurrent deficient socioeconomic and biological factors in the community modify the severity of the endemic. High altitude seemed to depress goiter formation. With increasing severity of the endemic, there was an increasing prevalence of nodular goiter, increase in goiter in children, increase in goiter in men in relation to women, and an increase in the average size of the glands. Endemic cretinism, deaf-mutism, and motor abnormalities were highly correlated

with the severest intensity of endemic goiter. The cretins studied did not appear to be hypothyroid.

... Fierro-Benitez, R.: New England J. Med.
280:296, February 6, 1969

* * *

DIABETES IN COCOPAH INDIANS

An epidemiological study of diabetes was conducted on 182 Cocopah Indians (81 per cent of the population) to determine the frequency of carbohydrate intolerance and its relationship to sex, age, and obesity in this tribe of American Indians. Of those aged 5 years and over, 17 per cent has plasma glucose levels of 160 mg/100 ml or more two hours after a 75-gm carbohydrate load, or if concurrently receiving hypoglycemic therapy for diabetes. The prevalence of hyperglycemia among those aged 35 years and over was 34 per cent compared to 50 per cent in a comparable age group of Pima Indians, another Southwestern American Indian tribe, yet obesity was more common in the former. The prevalence of hyperglycemia among the Cocopah of Arizona was similar to that previously reported among the Cherokee Indians of North Carolina.

... Henry, R. E., et al.: Diabetes 18:33, Jan.
1969

* * *

DIABETES IN SENECA INDIANS: PLASMA INSULIN RESPONSES TO ORAL CARBOHYDRATES

In a group of adult Seneca Indians living in western New York, 14 per cent were discovered to have previously diagnosed diabetes, and 20 per cent of the remainder had a plasma glucose of 200 mg/100 ml or greater one hour after oral carbohydrate. Glucose and insulin responses to oral carbohydrate were evaluated in 50 of these subjects not known to have diabetes prior to the initial survey. "Diabetic" and "normal" categories were established on the basis of the glucose levels after oral carbohydrate. The diabetics were older, more obese, and had greater fasting and post-glucose insulin levels than the normal subjects. Diabetics with obesity indices matched to normals still demonstrated twofold increases in both fasting and post-glucose insulin levels. Elevated insulin levels of the Seneca diabetics are only partly explained by coexistent obesity and suggest the presence of a diabetes associated insulin resistance.

... Frohman, L. A.; Doebelin, T. D., and Emerling, F. G.: Diabetes 18:38, Jan. 1969

⚓ ⚓ ⚓

TWO SENTENCE ESSAY

In 1930 a man who worked too hard and got an ulcer was regarded as a hero wounded in the war for material success. In 1960, the same man is looked on as a compulsive neurotic with twisted values.

... Herman Kahn, of the Hudson Institute



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Indications: Hypertension and many types of edema involving retention of salt and water.

Contraindications: Hypersensitivity and most cases of severe renal or hepatic diseases.

Warning: With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur.

Use with caution in pregnant women and nursing mothers since the drug may cross the placental barrier and appear in cord blood and since thiazides may appear in breast milk. The drug may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of childbearing age, balance benefits of drug against possible hazards to fetus.

Precautions: Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated.

Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria.

Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

Adverse Reactions: Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic hypoten-

sion, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization.

Average Dosage: 50 or 100 mg. with breakfast daily or 100 mg. every other day.

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Health and Welfare Legislation Enacted By The Rhode Island General Assembly, January Session, 1969

LEGISLATION ENACTED

Blood

The General Assembly approved of three resolutions for appropriations for Rhode Island Blood-mobiles. They were \$2,000 for the Veterans of Foreign Wars; \$3,000 for the American Legion; and \$1,000 for the Knights of Columbus.

Hearing

A resolution approved in the 1968 session was amended to permit a June 4, 1969 reporting date. This resolution had created a special Senate commission to study the problems of the hearing-impaired populace between infancy and age twenty within Rhode Island.

Hospital Legislation

A bill was approved to establish staggered terms for seven members of the Health Services Council who are appointed by the governor. The bill also provides that the legislative members serve until the end of their term. Under the present section there are no specific terms for gubernatorial appointments.

Given another year to conclude its studies was a commission to investigate hospital room rates and to advise whether such rates should be placed under state regulation.

Malpractice Evidence

Over the strong objection of the Medical Society an act allowing the introduction into evidence in malpractice actions of published opinions in books and treatises was signed into law by the governor. Representatives of the medical society, including its president, Stanley D. Simon, M.D., discussed the bill with the governor, but to no avail. Also signed by the governor was legislation to admit in evidence the written records and reports of deceased physicians and dentists concerning a patient who suffered injuries or death and is a litigant seeking the recovery of workmen's compensation benefits.

In a companion matter, the General Assembly approved of a measure which was favored by the governor to allow certified bills for prescriptions and orthopedic appliances to be admitted in evidence in personal injury cases without requiring the pharmacist or retailer to appear.

Medicine Costs

The General Assembly approved, and the governor signed a bill creating an eleven member legislative commission to investigate the cost of medicines. The commission was given a reporting date of January 15, 1970.

Mental Health

Recent newspaper stories have indicated that Governor Frank Licht intends to submit to the General Assembly by next February a plan for the reorganization of a number of state agencies, including those in the field of mental health. The Medical Society's Committee on Mental Health has long advocated and has vigorously pressed for such administrative changes in the mental health field. This year the committee met with Senator Henry Laliberte who heads a legislative study group to consider a proposed reorganization of various state agencies. After consultation with Senator Laliberte, the Medical Society's Committee on Mental Health agreed to pursue for adoption by the General Assembly its proposal that a separate Department of Mental Health should be created and headed by a qualified director. With other mental health bills, however, it failed to move, while Senator Laliberte's Commission reorganization bill was passed and signed by the governor.

Drug Addiction

A resolution was passed which extended the reporting date to April 15, 1970 of a commission studying the field of drug addiction. Also adopted by the General Assembly and signed by the governor was a bill which abolishes all minimum penalties for narcotics violators and providing up to 20 years on the first offense, and not more than 30 years for subsequent convictions for the illegal manufacture of marijuana. Also signed by the governor was legislation to permit authorized persons to apply to any court for an order directing a peace officer to apprehend and transport the person to a state mental institution, with the application to be accompanied by a physician's certificate.

Marathon House

Also meeting with the favor of the legislators and the chief executive of Rhode Island was a resolution calling for an appropriation of \$25,000 for Marathon House.

Psychologists Licensed

An act relating to the certification of psychologists met with the approval of the General Assembly and was signed by the governor. The bill adds psychology to the lists of arts and sciences which are regulated by the department of health. The law regulates those psychologists who are engaged in private practice and provides for a board of psychology to advise the health director concern-

(Continued on Page 365)

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HEALTH AND WELFARE LEGISLATION

(Continued from Page 363)

ing applicant testing and recommendations for applicant certification. The bill which was approved, did not include a section in the original legislation which would have made the professional relationship between a psychologist and his client legally confidential.

Nurses

Enacted into law was legislation which gave to nurses immunity from liability for ordinary negligence when rendering gratuitously emergency aid to a person in need. The bill exempted from immunity those acts and omissions constituting gross, wilful, or wanton negligence at a hospital, doctor's office, or clinic where such services are usually rendered.

Nursing Homes

An amended resolution was signed by the governor to reduce from 13 to 7 members of a study commission which is investigating the entire operations and functions of nursing homes in the state. The entire operations and functions of nursing homes in the state. The commission will report back to the legislature no later than March 31, 1970.

Optometry Legislation

Legislation was approved which calls for applicants for the optometry examination to have a minimum two years' attendance at an undergraduate college and to have graduate from a school or college of optometry approved by the Division of Professional Regulation which maintains an optometry course of not less than four years.

School Immunization Requirements

The previous statute calling for a mandatory licensed physician's certificate for immunization was amended to provide that "every person upon first entering any private or public school in the state as a pupil shall furnish to the administrative head of such school evidence that such person has been immunized against such diseases as may from time to time be prescribed by the regulation of the director of health and the commissioner of education..." The amendment is attributed to the issuance at mass immunization clinics of inoculation cards.

Sight Foundation

A resolution was passed and signed by the governor to appropriate \$2,000 for the Rhode Island Sight Foundation for the operation and maintenance of its sightmobile.

Temporary Disability Insurance

Legislation was adopted to place a \$250 ceiling on maternity benefits under the TDI benefits. This

(Continued on next page)

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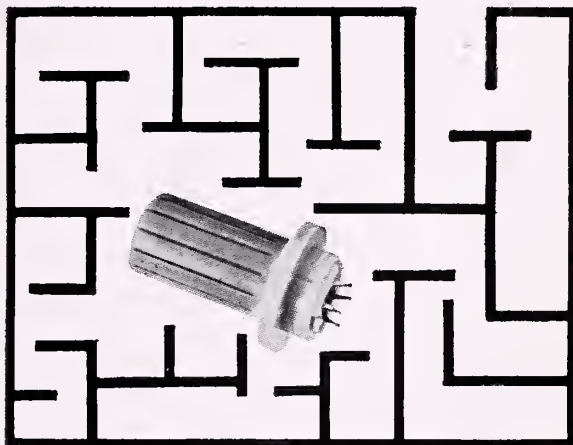
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Precautions—Nonspecific reactions are rare, but may occur. Vesiculation, ulceration or necrosis may occur at test site in highly sensitive persons. The test should be used with caution in patients known to be allergic to acacia, or to thimerosal (or other mercurial compounds).

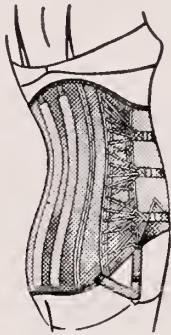


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bill is designed to stem the reduction of the TDI fund.

Of the 22 new study commissions created by the General Assembly this year, one included a group to ferret out methods to insure the solvency of the TDI fund and report back to the legislature February 4, 1970.

Uniform Anatomical Gifts Act

A significant aspect of the Medical Society's work was brought to fruition when the General Assembly approved and the governor signed, the Rhode Island Anatomical Gifts Act. The act coincides very closely with the proposed act adopted by the American Medical Association and the American Bar Association in Miami in 1968. The act sets the minimum age of a donor at 21 instead of age 18 of the AMA-ABA proposal, and it also includes a section on religious beliefs which would prohibit the donation of an organ.

Organ Transplants

A resolution passed last year was amended to permit a General Assembly Study Commission investigating the entire field of transplanting vital human organs to extend its report date to April 8, 1970.

Workmen's Compensation

Prospective legislative changes in the Workmen's Compensation statutes flooded the General Assembly; however, Governor Licht's bills met with the most success. Significant legislation adopted in this field included:

1. Removal of the current limitations of \$900 for physicians and the \$1,500 for hospital services was effected, and no limits are now set for medical expenses. The bill also eliminates the necessity of obtaining authorization from the Workmen's Compensation Commission for medical expense.

2. Elimination of the dual payment provisions of the temporary disability insurance and Workmen's Compensation.

3. Increase of the maximum weekly compensation rate from \$45 to 60 per cent of the average weekly wage, but not less than \$70, and raise of the minimum rate from \$20 to \$30. The legislation also reduces the maximum time of compensation from 1,000 to 500 weeks and increases the maximum amount of compensation from \$16,000 to \$32,000.

4. Provision for partial disability compensation of 60 per cent of the difference between the wages earned at the time of the injury and the wages earned upon return to work, but not more than the maximum weekly rate paid for total disability. The gross amount of compensation is \$32,500.

(Continued on Page 368)

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SCRAPBOOK
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Obesity Oddities

FACT & LEGEND

O

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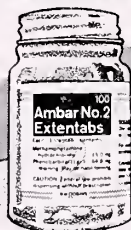
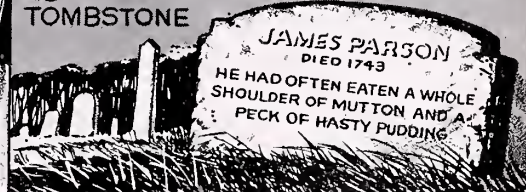
SHAKESPEARE

WAS AWARE OF THE DANGERS OF OBESITY HE WROTE...

*Make less thy body hence
and more thy grace;
leave gormandizing;
Know thy grave doth
gape for thee wider
than for other men.*



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TOMBSTONE



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**AMBAR
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IS APPROXIMATELY ONE
HALF THAT OF OTHER LEAD-
ING APPETITE SUPPRESSANTS
AN IMPORTANT FACTOR
IN LONG TERM THERAPY

CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety...helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

AMBAR #2 EXTENTABS®

methamphetamine HCl 15 mg.,
phenobarbital 64.8 mg. (1 gr.)
(Warning: may be habit forming).

BRIEF SUMMARY/Indications: Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

A. H. ROBINS COMPANY,
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A-H-ROBINS

HEALTH AND WELFARE LEGISLATION

(Continued from Page 366)

5. Additional compensation for specific injuries was increased from a maximum weekly amount of \$30 to \$45 and the minimum weekly sum from \$16 to \$30, including a provision for the payment of occupational deafness.

6. Change in the rate of compensation to a widow from \$30 a week plus \$4 for each dependent child to the rate payable to an injured workman for total disability. The bill also increases the dependent children allowance from \$4 to \$6.

7. Authorization for physicians and hospitals to file petitions on their own behalf for payment of medical and hospital bills incurred by an injured employee where payment is not made or is refused by the employer or the employer's insurer. This procedure formerly had to be initiated by the injured employee on behalf of his physician or hospital.

8. Provision to broaden the list of documents, an exact duplicate copy of the original of which an injured employee and his attorney are entitled to receive, including hospital records, nurses' notes, personnel records or statements by foremen. Failure to furnish such documents precludes their use by the employer, his insurer, or attorney and are inadmissible in any proceeding if an objection is made by the employee to their admission.

BILLS VETOED BY THE GOVERNOR

The governor refused to sign a bill which would have given recipients of social welfare the right to select chiropractic treatment. In its original form the legislation had proposed non-discrimination against chiropractors, osteopaths, and optometrists by any state department in any medical plan involving the expenditure of state money. But this measure was amended in the closing days of the legislative session and quickly passed both Houses and was sent to the governor. After approximately a week of consideration, in addition to discussion with Medical Society representatives, Governor Licht vetoed the chiropractic bill.

Also vetoed was legislation which would have established a continuing commission within the education department for the instruction of persons with impaired hearing and to establish a testing center. The bill had also provided for the establishment of a data center within the Department of Health and mandatory reports of persons with impaired hearing up to age twenty.

Also vetoed by the governor was a bill that would have provided for the establishment of a supervisor of special problems in the Department of Education to deal with narcotic problems.

IMPORTANT BILLS NOT PASSED

Among the legislative proposals that died in the General Assembly and which the Medical Society opposed vigorously in the closing days of the session was a bill that would have expanded the definition of optometry and would have allowed the optometrist to detect any diseased or pathological condition of the eye, and would have permitted the use, prescription, or furnishing of lenses, prisms, exercises or any physical, mechanical, physiological, or psychological therapy.

Also left in committee were bills which would require physicians to reduce oral prescriptions to writing within 48 hours and that the full name of the physician and patient be included on every prescription label; legislation which would make it a felony to assault a physician while in the performance of his occupation; a bill which would require all licensed hospitals to admit the patient of any duly licensed physician, even the physician who is not on the staff.

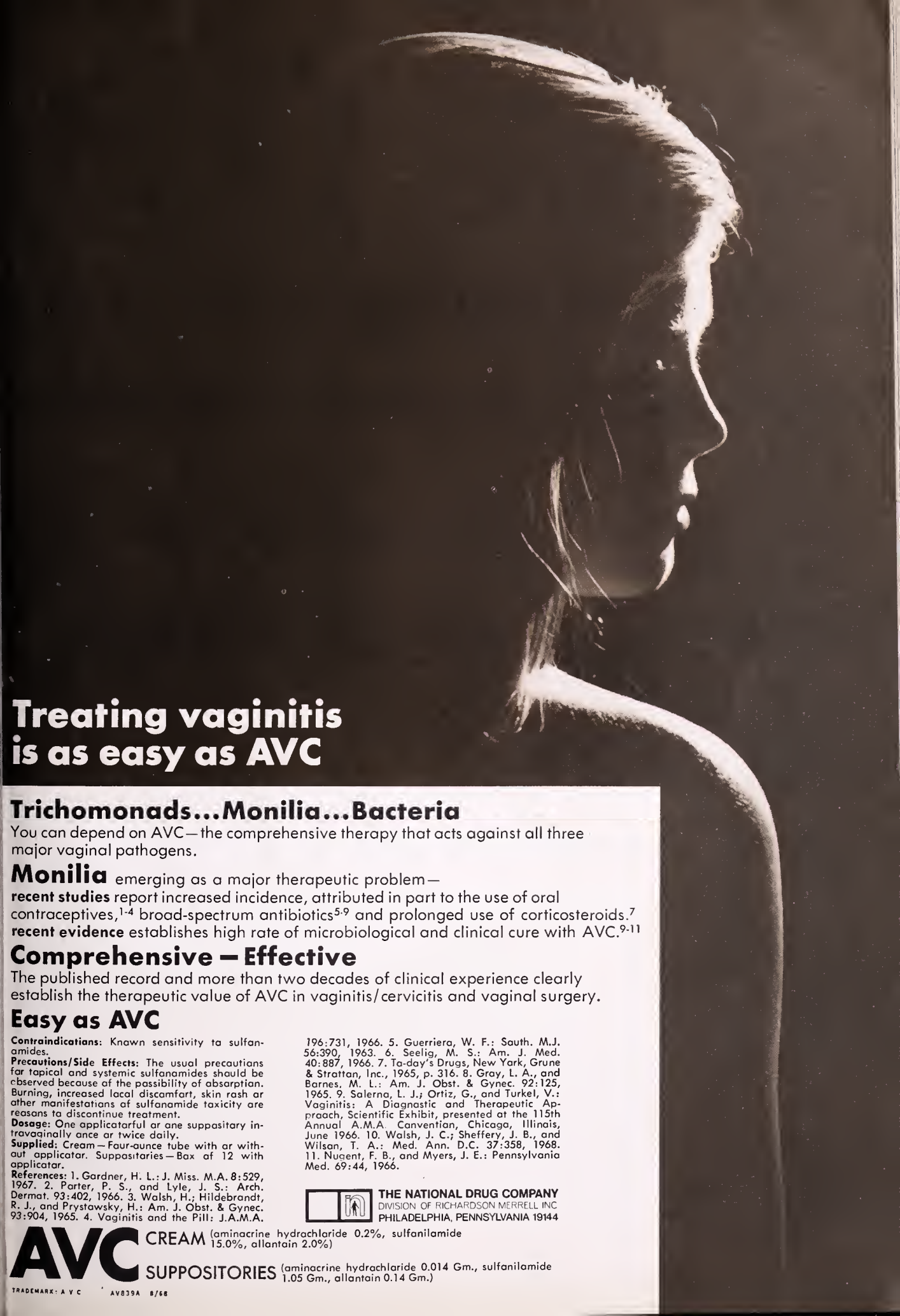
In related matters, a bill died in the House which would have entitled licensed physicians to practice in all Rhode Island Hospitals unless denied admission after a hearing, and a resolution to create a special legislative commission to study the feasibility of instituting minimum standards for personnel and services in emergency rooms in all hospitals in the state.

Other legislation which failed to gain approval of both branches of the General Assembly included an act to create a commission to study the feasibility of establishing a cooperative program between the Medical Society and all local police departments to furnish emergency medical aid nights, Sundays, and holidays, and a second act which would have provided that ambulances, rescue vehicles, and other emergency vehicles transporting a person to a hospital to convey that person to the hospital of his choice.

A proposal which gained the approval of the House in the closing days of the session but which the Senate failed to pass would have required medical examiners to examine all drivers and persons deceased as a result of a fatal accident and file a report with the registrar. This legislation would have complied with the federal highway safety act. Under the provisions of another bill, medical examiners would have been required to examine bodies of persons who have died from an abortion or suspected abortion. This measure was adopted by the Senate but died in the House.

Two bills left in the House and opposed by the Public Laws Committee of the Medical Society called for an appropriation of \$25,000 to develop within the Health Department a nursing capability in terms of home dialysis, and the regulation of

(Concluded on Page 369)



Treating vaginitis is as easy as AVC

Trichomonads...Monilia...Bacteria

You can depend on AVC—the comprehensive therapy that acts against all three major vaginal pathogens.

Monilia emerging as a major therapeutic problem—
recent studies report increased incidence, attributed in part to the use of oral contraceptives,¹⁻⁴ broad-spectrum antibiotics⁵⁻⁹ and prolonged use of corticosteroids.⁷
recent evidence establishes high rate of microbiological and clinical cure with AVC.⁹⁻¹¹

Comprehensive — Effective

The published record and more than two decades of clinical experience clearly establish the therapeutic value of AVC in vaginitis/cervicitis and vaginal surgery.

Easy as AVC

Contraindications: Known sensitivity to sulfanamides.

Precautions/Side Effects: The usual precautions for topical and systemic sulfanamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash or other manifestations of sulfanamide toxicity are reasons to discontinue treatment.

Dosage: One applicatorful or one suppository intravaginally once or twice daily.

Supplied: Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

References: 1. Gardner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., and Lyle, J. S.: Arch. Dermat. 93:402, 1966. 3. Walsh, H.; Hildebrandt, R. J., and Prystowsky, H.: Am. J. Obst. & Gynec. 93:904, 1965. 4. Vaginitis and the Pill: J.A.M.A.

196:731, 1966. 5. Guerriero, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. Today's Drugs, New York: Grune & Stratton, Inc., 1965, p. 316. 8. Gray, L. A., and Barnes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Salerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. 10. Walsh, J. C.; Sheffery, J. B., and Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.



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SUPPOSITORIES (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

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Orenzyme[®] Bitabs

One tablet q.i.d.

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

DOUBLE STRENGTH

Proteolytic enzyme therapy specifically indicated for the rapid resolution of inflammation and edema as adjunctive therapy in accidental and surgical trauma.

1 tablet q.i.d. provides recommended therapeutic dose at lower cost.



Description: ORENZYME BITABS offers the therapeutic effects of trypsin in an oral form as adjunctive therapy for the rapid resolution of inflammation and edema. ORENZYME BITABS is convenient to use, promotes patient cooperation and is ideally suited for maintenance therapy following parenteral trypsin.

Indications: When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:

- ☐ Accidental Trauma
- ☐ Postoperative Tissue Reactions.

Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.

Contraindications: ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.

Precautions: It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.

Adverse Reactions: Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.

Dosage: One tablet q.i.d.



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Peripatetics

A new slate of Staff Association officers has been elected at The Miriam Hospital. BANICE WEBBER heads the group as President; with STANLEY SIMON, Vice President; MAX BLOOM, Secretary; M. HOWARD TRIEDMAN, Treasurer, and ABRAHAM HORVITZ as Staff Representative to the Medical Board.

New staff appointments at The Miriam Hospital have recently been announced. ALDEN BLACKMAN joined the Active Staff in Medicine, and ROBERT H. ROSEN in Surgery. JACOB DYCKMAN, Pathologist-in-Chief at The Miriam, has been appointed an Assistant Professor of Pathology at Brown University.

* * *

RAYMOND MOFFITT has been honored by election to the Presidency of the R.I. Society of Internal Medicine at its annual dinner meeting recently held at Kirkbrae Country Club. Retiring President MELVYN HOFFMAN installed the new officers; they include JOHN DILLON, Vice President; RICHARD FRARY, Secretary-Treasurer; ROBERT V. LEWIS, President-Elect; RICHARD BARONIAN, FRANCIS VOSE, DONALD FITZPATRICK, RAYMOND RILEY, and JOHN PINTO, Members of the Council.

* * *

The Rhode Island Heart Association elected new officers at its annual meeting: President LAND W. JONES; Vice President, WILLIAM S. KLUTZ.

* * *

PIERRE F. CONZE was recently certified as a Fellow of the American College of Anesthesiologists.

* * *

LAURENCE A SENSEMAN, long a Vice President, recently was made President of the International Commission for the Prevention of Alcoholism.

* * *

Re-election was the rule at the recent Staff Association meeting at the Butler Hospital. MELVIN JOHNSON is again President; MAX FAINTYCH, Vice President; GABRIEL A. NAJERA, Secretary-Treasurer, and LOUIS SORRENTINO and MARIO TAMI, Members-at-Large.

* * *

The staff of the Birth Defects Clinic, Child Development Center, Rhode Island Hospital gave a

surprise party for Doctor HAROLD G. CALDER on April 22 to celebrate the anniversary of his sixty years devotion to medicine. Doctor Calder, who attends the Clinic regularly, hung out his shingle in 1909.

EDITOR'S MAIL BOX

To the Editor:

There is a significant printer's error in my review of *Conflict in Society* as it appeared in the April 1969 issue of the RHODE ISLAND MEDICAL JOURNAL. In the first paragraph the word "psychologist" should read "psychiatrist."

JOSEPH M. ZUCKER, M.D.

222 Gano Street
Providence, R.I. 02906

HEALTH AND WELFARE LEGISLATION

(Concluded from Page 368)

the business of selling hearing aids at retail upon prescription of a physician specializing in the treatment of the ear. This latter restrictive aspect of the bill was opposed by the Committee since it was that body's opinion that all licensed physicians are qualified to examine for hearing loss.

Two bills calling for an increase of \$25 for the annual license fees for all doctors failed to move from committee while approximately 10 legislative proposals concerning mandatory reports from physicians concerning a person's ability to operate safely a motor vehicle, the implied consent law, and the breathalyzer test, failed to win adoption during the session.

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Cranston Street, Cranston, Rhode Island

For Information Call 944-7526

For elderly patients
in need of a mild tranquilizer
consider **Tybatran**[®]
brand of tybamate

(When you consult
the Prescribing Information
you may agree
it makes good sense)



Indications: Tybatran (tybamate) has afforded symptomatic improvement in a variety of psychoneurotic disorders, especially in the treatment of the anxiety and tension components of psychoneuroses. Anxiety states manifested somatically have responded to Tybatran (tybamate).

Tybatran (tybamate) has been useful in the control of agitation in the aged and in the alleviation of some of the adverse emotional accompaniments of senility.

Tybatran (tybamate) has been used with benefit in the treatment of depressive symptoms associated with anxiety and other symptoms of psychoneuroses. However, it is not indicated for primary treatment of depressive states. It is not an antipsychotic agent, although it has been used as adjunctive therapy in some psychotic patients.

Dosage: One 350 mg. capsule, 3 times daily and two at bedtime is suggested as the adult starting dose. Adjust to suit individual requirements. Daily doses above 3000 mg. are not recommended.

Contraindications: Known hypersensitivity to tybamate. Since no studies have been done with this drug in human pregnancy, it should not be used in pregnancy unless the potential benefit outweighs the risk.

Warnings: Administer cautiously to patients receiving phenothiazines or other CNS depressants or having history of convulsive seizures (See Adverse Reactions). Consider possibility of additive actions with alcohol or other psychotropic agents, particularly phenothiazines or MAO inhibitors.

Precautions: Avoid abrupt withdrawal after prolonged use, although withdrawal symptoms have not been reported to date. Exercise caution in addiction-prone individuals. If symptoms of hypersensitivity occur, discontinue at once and initiate appropriate symptomatic treatment. Avoid activities requiring optimal mental alertness if drowsiness or vertigo are present. As with any new drug, use cautiously in patients with history of drug allergies, blood dyscrasias, and hepatic or renal disease; periodic measurements of hepatic, hematopoietic and renal function should accompany prolonged and/or high doses.

Adverse Reactions: Most frequent reactions, rarely requiring discontinuation of tybamate, include drowsiness, dizziness, nausea, insomnia, and euphoria. There have been a few reports of skin rash, urticaria, and pruritus. Rare side effects include hyperactivity, fidgetiness, flushing, and tachycardia, suggesting excessive stimulation; also ataxia, unsteadiness, confusion, feeling of unreality, "panic reaction," fatigue, headache, paresthesias, vertigo, gastrointestinal disturbances, glossitis, and dry mouth. Grand mal or petit mal seizures have been reported in a few hospitalized psychotic patients receiving tybamate (up to 6000 mg. daily) together with phenothiazines and other psychotropic agents, but not with tybamate alone. Consider the possibility of rare, serious adverse reactions such as may occur with the related drug, meprobamate. If excessive amounts are ingested, gastric lavage and symptomatic therapy, including central stimulants as necessary, are recommended. Before prescribing, consult package circular.

Supply: Tybatran (tybamate) is available in green, sealed capsules of three strengths: 350 mg., 250 mg., and 125 mg. Each strength is supplied in bottles of 100 and 500.

Ten Clinical Commandments

First, there is no substitute for learning from direct contact with patients. A clinical discipline cannot be learned in the laboratory, by reading, or by listening to lectures. There is no substitute for a good history, a good physical examination and the mature clinical acumen of the physician.

Second, the practice of good clinical medicine is an arduous task; clinical responsibility is a full-time, 24-hour-a-day job. You cannot take proper care of sick people on an eight-hour, four-day weekly schedule and still do your job properly. Don't keep patients waiting. Take time to explain matters to them.

Third, be optimistic; most illness is relievable with God's help and without too much interference from the physician!

Fourth, be patient. A period of observation is sometimes the only road to a correct diagnosis. Don't impress patients or yourself with a mass of unnecessary laboratory tests.

Fifth, don't be too esoteric. At the risk of seeming facetious it is worth noting that the commonest diseases occur most often. Think of these first.

Sixth, don't overtest patients into possible complicating conditions unless absolutely essential. Don't do any tests on patients that you wouldn't do on your family or yourself, under similar circumstances.

Seventh, use new drugs warily. It is better to learn to use a few important and basic drugs with skill, than to use the last one that the detail man dropped on your desk. Many disorders result from the injudicious use of drugs, and too many hospital admissions are due to complicated and unwise treatment.

Eighth, physician, know thyself. Know your strengths, your weaknesses; cultivate a sense of humor; continually re-examine your own clinical work and your conduct in it. Continuously cultivate curiosity about disease processes, for this is the essence of an exciting life in clinical medicine, but treat the patient as well as the disease. Always ask for consultative help if you are stumped or if the patient requests it.

Ninth, except in consultation, do not discuss patients by name with other physicians or with other patients, relatives or friends. The patient's disorder may be discussed at any time with anyone, as long as the patient is not identified and his confidence possibly betrayed. Never discuss diseases in the hearing of patients.

Tenth, learn from your errors, and may they be few. Remember that occasional human error is built into human function. Each mistake should teach you a lesson. Don't too easily condone the same error twice.

... As conceived by S. B. Wortis, M.D. and H. F. Klinefelter. Reprinted with permission from THE INTERNIST, April 1969

WHAT PRICE SOCIAL SECURITY?

National Business Organization Reports On Study Of Old Age Re- tirement System Costs*

Presidents may come and Presidents may go, but the credibility gap may go on forever.

This is the reaction of researchers at the National Federation of Independent Business after studying the full-scale attempt by the Social Security Administration to refute Federation criticism of the old-age retirement system, a rebuttal which paints a rosy picture for today's young couples who live to age 79.

The public's credibility (or gullibility) is being tested again, says the Federation.

Last year, the Federation did a cost-study of Social Security which found that a 25-year-old and his employer will pay up to \$31,293.60 (excluding Medicare) for Social Security coverage during 40 working years and, at 4 per cent compounded as collected, this would build to \$73,275 by retirement time. The Federation concluded that today's young man and his wife will have to defy life expectancy tables to collect anything near his equity on benefits of \$323 a month (or \$218 if alone), starting in the year 2008.

The Social Security Administration, apparently stung by this analysis, has distributed a news release with its own computation, arriving at quite a different conclusion. Paraphrasing the Federation's finding that "Social Security is a real bargain for some, but considerably less so for others," it would appear that the Federation concurs with the agency article.

The Social Security publicists start with the proposition that the employee tax, drawing 4 per cent interest, will make a fund of "almost \$38,000, exclusive of contributions made for him by his employer."

Are "contributions made for him by his employer" to be dismissed? asks the businessmen's Federation, pointing to some confusion among Administration spokesmen on this point. Last year, Commissioner Robert M. Ball, answering the Federation's study in the American Medical Association

News, said "the employer's Social Security contribution is not earmarked for the benefit of the particular employee." Now, the Administration drum-beaters acknowledge contributions are "made for him" but exclude them from an equity calculation!

Excluding employer contributions can hardly provide a fair analysis, says the Federation, because if this money were not taken by Social Security it might be used to purchase private health or life insurance, retirement annuities or other employee benefits.

To ignore them is like evaluating a group hospital insurance policy jointly paid for by employee and boss, but omitting the employer's payments from consideration.

The nation's employers, who are paying more than \$13 billion a year into the Social Security fund, feel they have the right to know how this money is being allocated if not to provide benefits for the employee upon which it is based, says the Federation. Especially since constantly increasing payroll taxes add to inflation, taking buying power away from present workers and Social Security recipients alike.

The Social Security Administration's analysis of today's young worker continues: "What he and his wife will get back, assuming they live 14 years after reaching age 65, which is the normal expectancy at that age, will be approximately \$55,000." This sum, explains the Federation, would include more than \$10,000 of accumulating interest; thus the "break even" point for recovery of the employee tax would come at age 77.

The big question raised by the agency's statement, says the Federation, is: How many couples now in their mid-20s will *both* survive until the husband is 79 years old? Social Security implies that most will.

Life expectancy at age 65, cited by Social Security, is not relevant in a study of today's 25-year-old, who must live four more decades before he will have an expectancy of 79. Current life insurance actuarial tables say a male now 25, has an expectancy of 70 years, or seven years short of the break-even point on the individual tax.

This Social Security "news story" apparently was sent to some 1,700 daily newspapers, each
(Continued on Page 373)

*Note: Unless otherwise indicated, all facts, opinions herein are based on the majority result of individually voted ballots, with documentary support on file open to inspection at headquarters. The Federation is composed entirely of independent business proprietors. At this time, the membership is 267,679 in the National Federation of Independent Business, Inc.

Dulcolax®...so predictable you can almost set patients by it.

Dulcolax works so effectively that the time of bowel evacuation can often be predicted.

Dulcolax tablets taken at night will usually result in a convenient bowel movement the following morning. Dulcolax suppositories generally work within 15 minutes to an hour.

Dulcolax may be given to the aged, pregnant or nursing women, and children. It may be particularly helpful in conditions in which straining should be avoided. The drug, however, is contraindicated in the acute surgical abdomen.

Dulcolax® bisacodyl





Clues to PVD The geriatric smoker

In studies on peripheral vascular disease—a common by-product of the degenerative aging process—considerable attention has focused on the important role of smoking in the progression of the disease. Although it may not be etiologic, smoking is widely recognized as a prominent contributing factor.¹

Skin blood flow—significant factor in PVD. Cutaneous digital vasoconstriction caused by nicotine has been observed both in normal subjects and in patients with peripheral vascular disorders.^{1,2} Among patients with peripheral vascular disease, however, age and the severity of the disease appear to modify the effects of nicotine. For example, in a study of older patients with marked peripheral vascular disease,³ changes induced by smoking were not statistically significant for the group as a whole. This was explained on the basis of decreased skin reactivity. *Smoking is not permissible in any stage of the disease, since even "... minimal reduction in blood flow in patients with ischemic limbs may pro-*

*duce a further reduction in tissue nutrition, and this may be another case of the proverbial straw on the camel's back."*³

In another study of patients with peripheral vascular disease,⁴ the investigators stress that decreased skin blood flow during smoking "... is the factor of most importance to the patient with peripheral vascular disease." *When such patients may adjust to the discomfort of vascular insufficiency in skeletal muscle, decreased skin blood flow may often lead to severe symptomatology.*

More and more physicians have adopted the practice of investigating for peripheral vascular disorder when confronted with a geriatric patient who is a habitual smoker. Once a diagnosis is established, therapeutic measures are directed toward increasing the peripheral circulation and appropriate management of the patient's general medical needs. These include the important safeguards of keeping warm and refraining from smoking. Professional model posed for illustration.

important in
total management of
peripheral vascular disease,
vascular spasm or
chilblains

Roniacol[®] Timespan[®] (nicotinyl alcohol tartrate)

for relief of ischemic symptoms

Convenience of b.i.d. dosage—sustained-release Timespan Tablets usually provide prolonged relief of ischemic symptoms with two doses daily.

Smoothness of onset—the action of Roniacol (nicotinyl alcohol) is smooth and gradual onset, rarely causing severe flushing.

Effectivity of action—relaxes the musculature of peripheral blood vessels.

High degree of safety—side effects seldom require discontinuation of therapy.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Conditions associated with deficient circulation; e.g., peripheral vascular disease, vascular spasm, trophic ulcers, decubital ulcers, chilblains, Meniere's syndrome and vertigo.

Caution: Roche Laboratories endorses caution in the administration of any therapeutic agent to pregnant patients.

Effects: Transient flushing, gastric disturbances, minor skin rashes and allergies may occur in some patients, none requiring discontinuation of the drug.

Dosage: 1 or 2 Timespan Tablets morning and night.

Supplied: Timespan Tablets—150 mg nicotinyl alcohol in the form of the tartrate salt, bottles of 50.

References: (1) Roth, G. M.; Shick, R. M., and Secrest, R. R., in James, G., and Rosenthal, T., *Tobacco and Health*, Springfield, Ill., Charles C Thomas, 1962, pp. 311-322. (2) Entmacher, P. S.: *Med. Sect. Amer. Life Convention* 51:149, 1963. (3) Freund, J., and Ward, C.: *Ann. New York Acad.* 10:85, 1960. (4) Coffman, J. D., and Javett, S. L.: *Circulation* 28:932, 1963.



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You might also say that all registered nurses aren't alike, either.



WHAT PRICE SOCIAL SECURITY?

(Continued from Page 372)

copy localized with individually-estimated costs and benefits for the number of local 25-year-olds.

The Federation wonders how much of the Social Security Administration's half-billion-dollar-a-year administrative budget went into this effort. The story is date-lined New York. Social Security has a regional staff there of 82 persons that does not include publicity specialists, leading to a question of whether Social Security has hired a Madison Avenue public relations firm.

Adding to the publicity cost, local Social Security offices had to compute the local figures to substantiate the "bargain" awaiting octogenarian couples.

Administrative expenses and past Congressional generosity in bestowing benefits explain why the system's reserves barely equal one year's benefits to current recipients. Every time Congress wants to increase retirement benefits, now averaging \$98 a month according to former President Johnson's January budget, it must also increase the tax on employee and employer, either by rate increase or by taxing additional income.

President Nixon has asked Congress for a 7 per cent benefit increase effective next February, and let stand President Johnson's recommendation that the combined employee-employer tax be increased from 9.6 per cent to 10.4 per cent, including Medicare, and taxable income raised from \$7,800 to \$9,000 a year. If approved, these changes would mean an 8.33 per cent tax increase on salaries up to \$7,800 and a 25 per cent boost on \$9,000 and above.

The Johnson budget estimated the tax increase would yield \$1.7 billion and his proposal for a 13-per cent benefit increase would cost \$1.6 billion. But President Nixon's proposed slash of benefits while leaving the tax recommendations stand would produce about three-quarters of a billion dollar surplus.

Such a tax increase would give further impetus to inflation, the Federation asserts, because half of it would come directly from business income. Even without a tax increase, Social Security receipts would increase as the economy grows.

Whenever the equity of future retirement benefits is challenged (as it has been repeatedly since the maximum tax has risen from \$94.50 in 1958 to the present \$37.60 plus Medicare) Social Security personnel point to the plan's disability and survivors' benefits. The National Federation of Independent Business, representing some 268,000 business owners, never has disputed the potential value of Federal disability and survivors' "insurance." However, even after deducting 20 per cent of tax collections for this purpose, as formulized by Economics Professor Colin D. Campbell of

Dartmouth College, the old-age benefits are still no bargain for today's young couple, the Federation maintains.

The employer's tax, omitted from the Social Security Administration computation, would add nearly \$38,000 more to the maximum fund for one employee, with interest, over the next 40 years, not counting any further increases passed by Congress. Today's 25-year-old and wife will both have to live past his 98th birthday under the present benefit schedule to deplete the joint fund.

In contrast, says the Federation, anyone retired as of January 1, 1968, represented at the very most tax deductions of 5,325 over a 31-year-period (\$7,751 with interest) and Social Security acknowledges this would be recovered within five years. Most of today's retirees and their employers paid in considerably less than this maximum.

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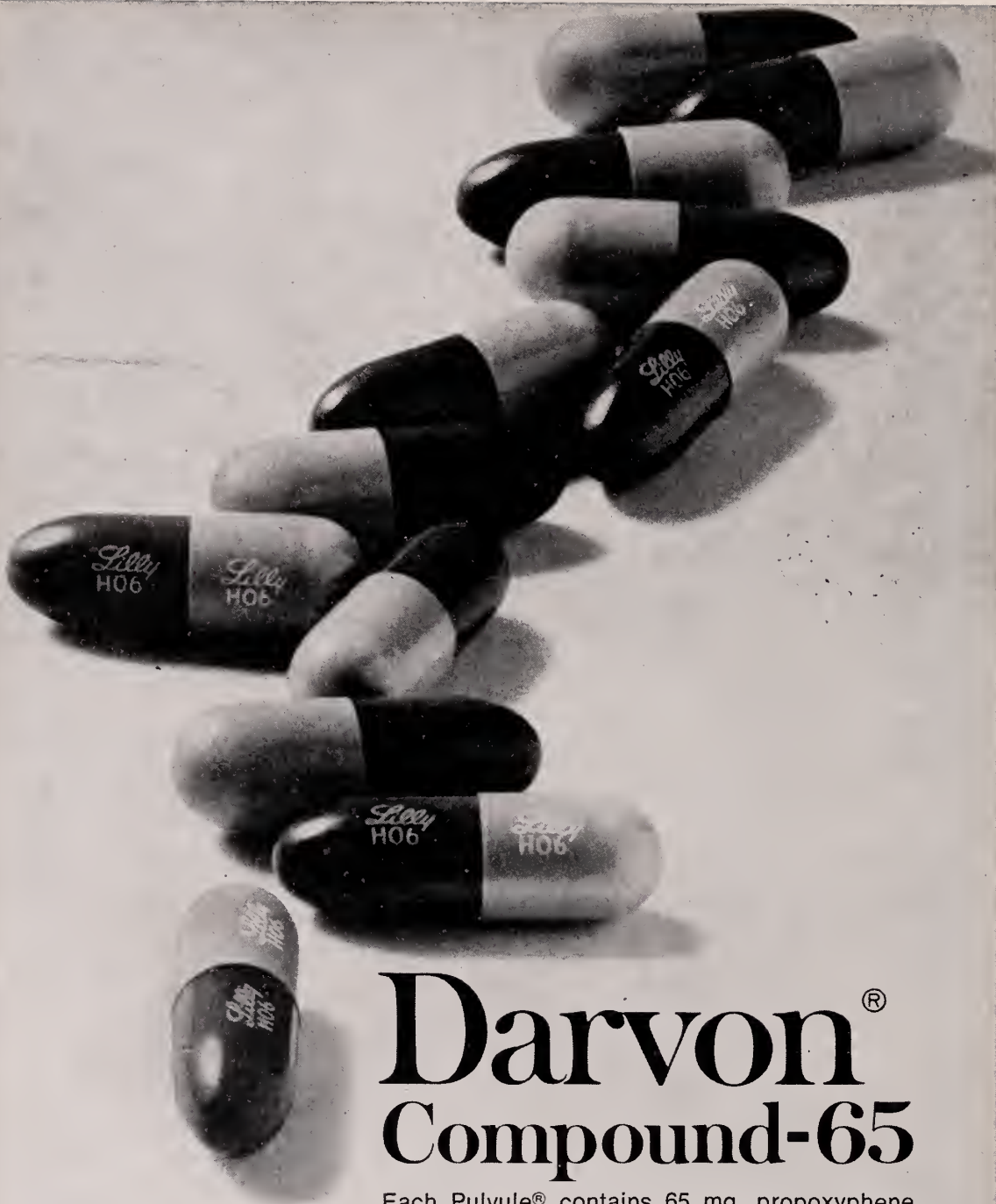
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OPEN HEART SURGERY BY A SIMPLIFIED TECHNIQUE*

Disposable Oxygenator Primed With Dextrose and Water Found Acceptable In 25 Cases

The development during the past fifteen years of the pump oxygenator has made temporary cardiopulmonary bypass for open heart surgery a safe and accepted procedure. For a number of years it was standard practice to prime extra corporeal pump oxygenators with freshly drawn heparinized blood. Many adverse physiological changes were associated with the use of large quantities of homologous blood. Emergency situations such as pulmonary embolism, which required the immediate availability of cardiopulmonary bypass, demanded a more simplified technique. Several priming solutions for pump oxygenators have been used successfully to replace the specially prepared heparinized blood with all of its inconveniences. In 1959 Panico and Neptune¹⁹ developed a bubble oxygenator in which physiological saline solution was used for priming. Zudhi,²⁴ Roe,²¹ DeWall,¹¹ Long,¹⁵ and Cooley^{7,8} have use a variety of perfusates as priming solutions. For several years Cooley³ and associates have advocated a hemodilution technique, using dextrose in distilled water as the priming medicine.

Since August 1967 at The Miriam Hospital we have performed cardiopulmonary bypass using a disposable plastic bubble oxygenator primed with 5 per cent dextrose in distilled water under normothermic conditions. In this paper we shall report our experiences and results in 25 consecutive cases of open heart surgery in which this technique was employed.

TECHNIQUE OF BYPASS

The disposable plastic bubble oxygenator is illustrated in Fig 1. The priming volume of 5 per cent dextrose in distilled water is 20 ml. per kg. of body weight for adults and 25-35 ml. per kg. of body weight for children weighing more than 14 kilograms. This priming volume of dextrose amounts to approximately one-half of the daily body fluid requirement.

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JAMES J. YASHAR, M.D., of Providence, R.I. Thoracic and Cardiovascular Surgeon, Providence, R.I.

Blood is drawn from the venae cavae by gravity drainage, using plastic catheters of adequate size to avoid significant resistance to flow (Fig. 1). The blood is driven into a defoaming oxygenator chamber by a system of oxygen dispersion. Blood in the oxygenator passes over stainless steel sponges coated with antifoam, is oxygenated, and is then passed through a filter, and flows into the arterial reservoir. The blood is returned to the patient via the common femoral artery, using a roller pump. A flow rate of 35-50 ml. per kg. per minute is used in adults, and 50-75 ml. per kg. per minute in children. Blood aspirated from the heart (coronary venous return and bronchial flow) is collected in a sterile plastic reservoir and returned to the patient (Fig. 1). During the perfusion nor-

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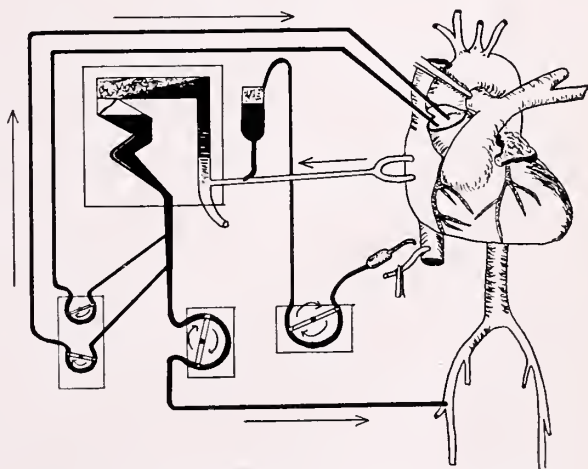


Fig. 1. Diagram illustrating technique of cardiopulmonary bypass using disposable bubble oxygenator primed with 5 per cent dextrose and water under normothermia conditions. Blood is drawn from vena cava by means of gravity. The oxygenated blood is returned to the patient via femoral artery using a roller pump.

*From the Department of Surgery of The Miriam Hospital and Brown University, Providence, Rhode Island.

mothermia is maintained in order to avoid complications which frequently accompany the hypothermic state. Upon completion of the bypass all blood remaining in the reservoir and tubing is returned slowly to the patient.

Throughout the operation and in the postoperative period, blood loss is usually replaced intravenously with acid citrate bank blood as with any major thoracic procedure.

The electroencephalogram and the central venous and arterial pressures are monitored continuously during the operation.

CLINICAL MATERIAL

During the 15 month period beginning in August 1967, this technique was employed in 25 patients with congenital or acquired heart disease.

The ages varied from 5 to 69 years, with a mean age of 37 years (Fig. II). Seventeen patients were female and 8 male. Seven patients had congenital malformations and 18 acquired heart disease (Tables I and II).

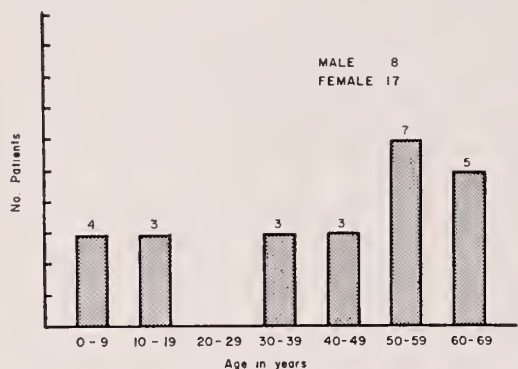


Fig. II. Age distribution of 25 patients who underwent open heart surgery.

Blood volume, red cell mass, total hemoglobin, hematocrit, platelets, serum electrolytes, arterial gases, free hemoglobin in serum and urine, and bleeding and clotting times were measured preoperatively and at frequent intervals during the postoperative period. Plasma volume was measured by the tracer dilution technique, using 2-5 microcuries of radioactive ^{131}I serum albumin for each determination. Hematocrit was measured in duplicate by the microhematocrit method on the blood sample obtained for blood volume measurements.

TABLE I.

Types of congenital heart disease among seven patients who underwent open heart surgery.

Lesion	No. of Patients
Pulmonic Valvular Stenosis	4
Atrial Septal Defect	1
Ventricular Septal Defect	1
Aortic Valvular Stenosis	1
Total	7

TABLE II.

Types of acquired heart disease among eighteen patients who underwent open heart surgery.

Lesion	No. of Patients
Mitral Stenosis	5
" Insufficiency	2
" Stenosis and Insufficiency	4
Aortic Stenosis	3
" Insufficiency	2
" Stenosis and Mitral Insufficiency	1
Left Atrial Myxoma	1
Total	18

The red cell mass was calculated as the product of calculated total blood volume and hematocrit.

RESULTS

Blood loss and replacement. Four patients did not require blood either during open heart surgery or at any time during the period of hospitalization (Fig. III). Nine patients received one unit of blood during surgery. One patient, who had had previous open heart surgery with resulting extensive intrathoracic adhesions, required 6,000 ml. of blood during open heart surgery and in the postoperative period. The average requirement of blood during open heart surgery was 1,100 ml.

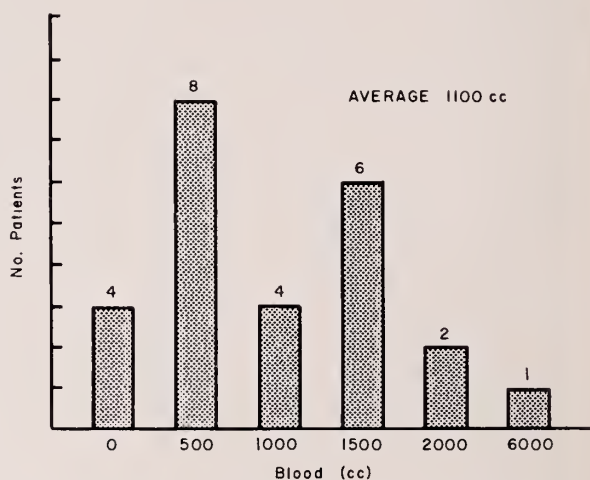


Fig. III. Blood requirement during open heart surgery and period of hospitalization in 25 patients undergoing open heart surgery.

Duration of cardiopulmonary bypass. The duration of total cardiopulmonary bypass for patients with congenital heart disease varied from 8 to 17 minutes with a mean of 10 minutes (Table III). In patients with acquired heart disease the duration of bypass varied from 13 minutes for open mitral commissurotomy to 82 minutes for correction of disease. In the last 8 cases the average period of bypass required for aortic or mitral valve replacement was 45-50 minutes.

TABLE III.

The duration of cardiopulmonary bypass in twenty-five patients undergoing open heart surgery.

	Duration of Bypass (Minutes)	Average (Minutes)
Congenital	8-17	10
Acquired	13-82	45

Urinary output. Urinary output during the operation averaged 150 ml. \pm 52ml. per hour. This high urinary output was caused by early excretion of 5 per cent dextrose in water used for priming the pump oxygenator. This marked diuresis persisted for several hours after surgery. During the first 24 hours the urinary output averaged 50 ml. \pm 18 ml. per hour (Fig. IV). Thereafter, the urinary output dropped, averaging 25 ml. \pm 17 ml. per hour during the second and third postoperative days. The limited oral and intravenous intake of up to 1,500 ml. in 24 hours in adults was probably largely responsible for the slightly low urinary output.

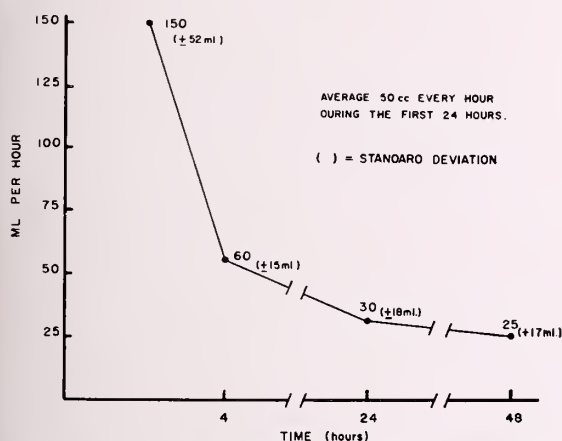


Fig. IV. Average changes in urinary output in 25 patients undergoing open heart surgery.

Blood volume determination. A slight fall in total blood volume 24 hours after surgery was seen consistently in these patients (Fig. V). Changes in hemoglobin and hematocrit were similar and were not altered during the first four hours after surgery. Forty-eight hours after open heart surgery a slight decrease in hemoglobin and hematocrit was noted. These changes apparently were due to hemodilution and to a lesser degree to destruction of the red cells by the pump oxygenator.¹⁰ Bleeding and clotting time determinations at the conclusion of open heart surgery and in the first 24 hours were within normal limits.

Serum Electrolytes. Immediately after open heart surgery serum sodium, potassium, chloride, and carbon dioxide content were slightly decreased,

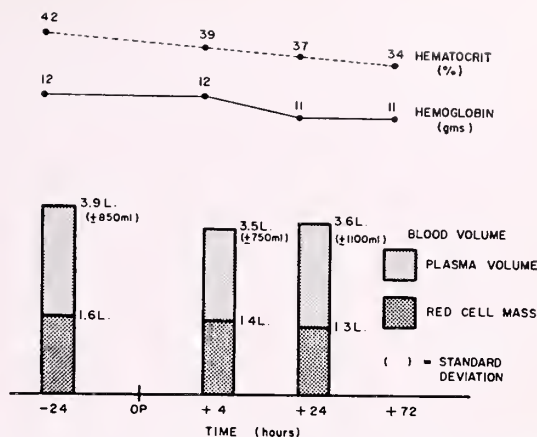


Fig. V. Average blood volume, plasma, red cell mass, hemoglobin, and hematocrit changes in 25 patients undergoing open heart surgery.

probably a result of hemodilution by the priming solution. These values returned to control levels five to seven days after surgery (Fig. VI).

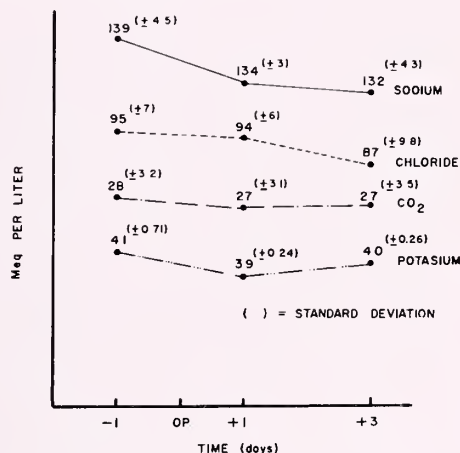


Fig. VI. Average electrolyte changes in 25 patients undergoing open heart surgery.

Arterial gas studies. Arterial pH, PO₂, and oxygen saturation were within physiological ranges four hours after surgery and during the following days (Fig. VII). However, at the conclusion of the operation and four hours later, arterial PCO₂ fell slightly below the normal level. This fall in arterial PCO₂ we believe to be due to some degree of hyperventilation with assisted respiration used in these patients for several hours after surgery. The PCO₂ rose gradually to normal values 72 hours following surgery. We observed mild compensated metabolic acidosis in all patients seen during the first few postoperative days (Fig. VIII).

The clinical results in these 25 patients were gratifying (Tables IV and V). There was no mor-

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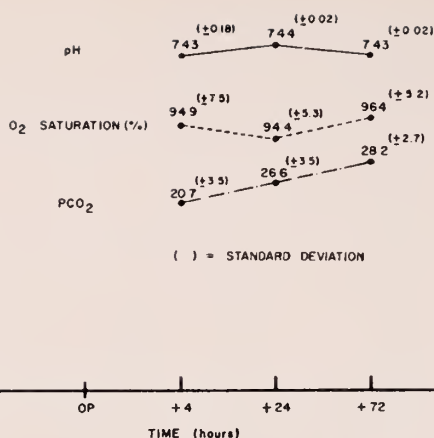


Fig. VII. Average arterial gas changes in 25 patients undergoing open heart surgery.

tality among 7 patients with congenital heart disease, although we encountered three complications: cardiac tamponade, wound infection, and thrombophlebitis of the lower extremity. The complications were treated successfully, and all patients in this group left the hospital in satisfactory condition. There was one death among 18 patients with acquired heart disease. This patient with double valvular disease (aortic stenosis and mitral insufficiency) succumbed one month after open heart surgery to renal shutdown and cerebral air embolism. One patient who had suffered air embolism

TABLE IV.

Type of operation and mortality and complications among seven patients with congenital heart disease.

Operation	No. of Patients	Mortality	Complication
Pulmonic Valvulotomy	4	0	Cardiac Tamponade Wound Infection Thrombophlebitis
Closure of A.S.D.	1	1	
Closure of V.S.D.	1	0	0
Aortic Valvulotomy	1	0	0
Total	7	0	3

TABLE V.

Type of operation, mortality, and complications among eighteen patients with acquired heart disease.

Operation	No. of Patients	Mortality	Complication
Open Commissurotomy	5	0	0
Mitral Valve Replacement	6	0	0
Aortic Valve Replacement	5	0	Air Embolism Renal Shut down Died one month Post-operative
Mitral Valve Replacement and Aortic			
Commissurotomy	1	1	
Atrial Myxoma	1	0	0
Total	18	1	2

to the brain during the immediate postoperative period was able to leave the hospital in satisfactory condition with no residual neurological sequelae.

DISCUSSION

Hemodilution in cardiopulmonary bypass for open heart surgery is superior to perfusion with pooled blood. Gadboys and associates¹² in 1962 proposed the term Homologous Blood Syndrome for the adverse effects observed when a pool of homologous blood was used for priming pump oxygenators. They concluded that matching of erythrocytes alone was inadequate for safe administration of large volumes of blood, and suggested that incompatibilities may exist between plasma, leukocytes, and platelets. They also implied that such incompatibilities may exist not only between donor and recipient, but also between the units of blood in the homologous blood pool. The homologous blood syndrome and the difficulty in procurement of quantities of heparinized fresh blood sufficient for cardiopulmonary bypass have encouraged the development of simpler techniques.

Following the report in 1960 of Zudhi and associates²⁴ on a hemodilution technique with 5 per cent dextrose in water, Cooley et al.,⁹ suggested its usefulness in pulmonary embolectomy. More recently Cooley⁴⁻⁸ and associates have routinely used the technique for open heart surgery. Minardi,¹⁶ Albaza,¹ and Long,¹⁵ have suggested the use of low molecular weight dextran as a priming solution. However, it has been shown by others that low molecular weight dextran may cause coagulation of fibrinogen and decreased clotting, thereby increasing the hazards of intra- and post operative bleeding. Furthermore, low molecular weight dextran remains in the vascular compartment for many hours¹³ following surgery and may cause prolonged hemodilution and a relative increase in cardiac index. Other priming solutions such as Ringer's lactate, 5 per cent dextrose in saline, or balanced electrolytes have been suggested.¹⁸ These solutions contain considerable amounts of sodium chloride and may produce sodium overload which is undesirable in cardiac patients.

There are several theoretical advantages in the use of a hemodilution method with 5 per cent dextrose in water:

1. Hematological complications are minimized by avoiding the use of large quantities of blood.
2. Vital organs are adequately perfused by avoiding capillary sludging.
3. The blood coagulation mechanism are better maintained.
4. The solution is always readily available.
5. The technique permits open heart surgery in patients who do not accept blood transfusion because of religious convictions.³

Our studies indicate that open heart surgery with

the use of a plastic disposable oxygenator primed 5 per cent dextrose in distilled water under normothermic conditions is well tolerated by patients, and that the priming solution is quickly excreted after surgery. Perfusion appears to be more adequate than with older methods, as indicated by more satisfactory maintenance of renal function and adequate oxygenation. Marked diuresis which occurs during the bypass (150 ml. an hour) usually persists for several hours following surgery. Thereafter, the urinary output gradually drops to 25-30 ml. an hour. Therefore, most of the dextrose solution used as the priming solution is excreted within 10 to 12 hours after surgery without causing any hypervolemia or overload.

During the postoperative period changes in serum sodium, potassium chloride, pH, PO₂, and PCO₂ are consistent with those observed in patients who have undergone major thoracic surgical procedures and stress phenomena. However, these changes return to normal values within five to seven days following surgery. The fall in PCO₂ observed during the first 24 hours following surgery is attributable to hyperventilation by the assisted respiration which is used in the immediate postoperative period. The blood loss after surgery was minimal (less than 300 ml.) in the majority of these patients. The free hemoglobin concentration in serum and urine at the conclusion of the bypass in 90 per cent of the patients was less than 35 mg. per cent. The fall in platelet count was not significant, and in most patients returned to normal values within three days after surgery.

With the exception of two patients who had suffered cerebral air embolism, all were mentally alert immediately following the operation. Patients were usually out of bed on the second postoperative day. The duration of hospitalization was similar to that for patients who had undergone major thoracic surgical procedures. Generally the patients were discharged from the hospital 10 to 14 days after surgery.

CONCLUSION

We have reported twenty-five consecutive patients subjected to open heart surgery with the use of a disposable bubble oxygenator primed with 5 per cent dextrose and water under normothermic conditions. One patient died. Some of the physiological changes following this technique of open heart surgery are analyzed. The results in these studies indicate that this technique in our hands is safe and efficient.

ACKNOWLEDGEMENT

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(Continued on Page 383)

IMPORTANCE OF THE FIRST HEART SOUND IN CARDIAC DIAGNOSIS*

Art Of Auscultation Enhanced By Understanding Of Mechanisms Of Acoustical Phenomena

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ology, and Assistant Professor of Medicine, The
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The complicated procedures that are currently available for the diagnosis of cardiac abnormalities sometimes obscure the importance of the simpler clinical tools. The cardiologist of a century ago relied on his stethoscope and frequently based his diagnosis largely on the meticulous use of this instrument. Today the electrocardiogram, the x-ray examination and, in some cases, the catheterization laboratory and other sophisticated procedures are important parts of a cardiac examination; however, much useful information can still be obtained from careful auscultation of the heart.

The cardiac sounds undergo characteristic alterations in disease states, and attention to them can yield helpful diagnostic information. The importance of careful scrutiny of the second heart sound has recently been emphasized.¹ It is our purpose here to review briefly the physiological forces responsible for the first heart sound and to call attention to some of the implications of changes in its character, timing, and intensity. These clinical features are summarized in Table 1.

CAUSE OF THE FIRST SOUND

The first heart sound can usually be divided into three components. These subdivisions are identified on the phonocardiogram shown in Figure 1. The first component is made up of a few low frequency vibrations which are usually at or near the limit of audibility. These sounds are thought to be primarily muscular in origin and to result from vibrations generated within the myocardium by the beginning of cardiac contraction. The second component is much louder and is associated with the events that cause the closure of the mitral and tricuspid valves. This is the part of the first heart sound that is usually perceived clinically. It will be discussed in more detail below. The terminal or third portion consists of a series of low intensity vibrations which are associated with the opening of the aortic and pulmonary valves and the beginning of ventricular ejection. Normally these vibrations are near the limit of audibility; however, this part of the first sound may become accentuated in the presence of a dilated pulmonary artery or

aorta and become quite loud. When this occurs, the terminal component of the first heart sound may be heard as a separate sound and is called an ejection sound.

The explanation for the second or valvular part of the first heart sound remains somewhat speculative. It appears clear, however, that the mechanism of closure of the atrioventricular valves is important in the genesis of this component. Under normal conditions, the forces produced by atrial contraction operate to swing the mitral and tricuspid leaflets toward closure during the immediate presystolic interval before the onset of ventricular contraction.² This occurs because the small increase in ventricular pressure that results from atrial contraction is sufficient to slow and sometimes reverse the flow of blood into the ventricle during atrial relaxation. This causes the open valve cusps to move toward the atrioventricular ring. This mechanism is shown diagrammatically in sections A and B of Figure 2. Final closure of the valve cusps is produced by the sudden increase in ventricular pressure produced at the onset of ventricular contraction and the tendency of blood to flow back through the open valve into the atria. Because of the presystolic positioning of the valves, the amount of regurgitation with closure is quite small. This

TABLE 1
THE FIRST HEART SOUND IN DISEASE STATES

Splitting			
No Split	Close Split	Wide Split	
Normal finding. (may occur in mitral stenosis and L. B. B. B.	Normal finding	R. B. B. B. Atrial septal defect with right ventric- ular failure (may occur in tricuspid stenosis)	
Intensity			
Soft	Variable	Loud	Loud and Snapping
1° AV Block. Primary myocardial disease. L. B. B. B.	3° AV block. Atrial fibrillation.	P. V. C. Fever. Excitement. Thyrotoxicosis. Atrial septal defect. Systemic hypertension. Tricuspid stenosis	Mitral stenosis.

*Supported in part by a grant from the Lucas County Branch, Northwestern Ohio Heart Association.

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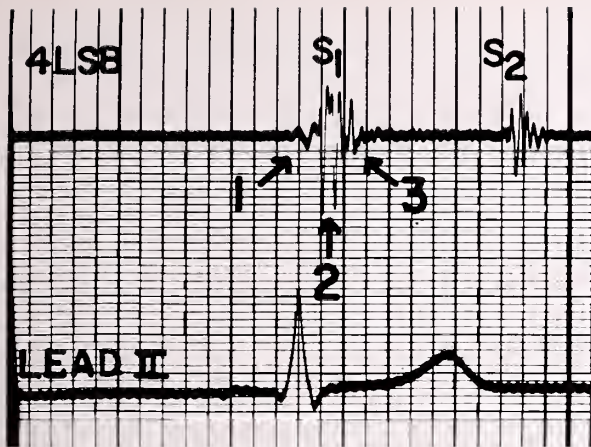


Fig. 1. Phonocardiogram taken from the fourth intercostal space to the left of the sternum labeled to show the three phases of the first sound: (1) initial muscular components, (2) valvular component, and (3) ejection component. Lead II of the ECG is included.

procedure is illustrated in section C of Figure 2.

The mechanism of valve closure just described is important to our understanding of the first heart sound because when the valves snap shut there is a sudden deceleration of the column of blood that is attempting to regurgitate back into the atria. This apparently liberates forces that set the valve cusps, the chorda tendineae and other tissues of the heart into vibration. These vibrations, along with those produced by the actual closing of the valve itself, summate to cause the loud, valvular portion of the first sound. These vibrations are quickly damped and as a result usually are present for about 0.03 to 0.04 seconds.²

SPLITTING OF THE SOUND

Under normal conditions, contraction of the left ventricle may slightly precede that of the right ventricle. In addition, the vigorous left ventricular contraction causes the pressure rise within that ventricle to be more abrupt than it is on the right side of the heart. As a result, closure of the mitral valve frequently occurs slightly before closure of the tricuspid valve. This causes the major (valvular) part of the first heart sound to become separated or split. This type of splitting normally does not exceed 0.03 to 0.04 seconds; however, this is usually sufficient to be detected clinically. An example of this type of splitting of the first sound is shown in Figure 3. A close split of this type is usually considered a normal auscultatory finding and has no particular clinical significance.

If the split is very close, it is sometimes difficult to separate the two valvular components of the first sound. The mitral component is loudest at the apex of the heart and the softer tricuspid sound is heard best in the fourth interspace to the left of

the sternum. For this reason, splitting can usually be determined clinically by listening in this latter location. Splitting of the first sound is not normally affected by respiration or change in position of the patient. This fact can be helpful in distinguishing a loud atrial sound and a single first sound from a split first sound. Right atrial sounds are often reduced in intensity during expiration, and left atrial sounds tend to be reduced when the patient stands. Unless one listens carefully, a widely split first heart sound may sometimes be confused with a presystolic murmur. An ejection sound

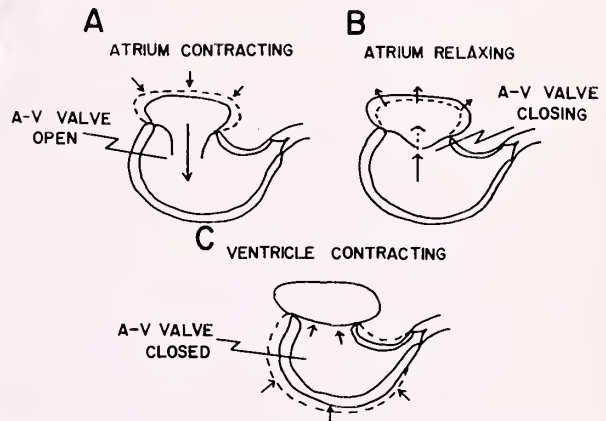


Fig. 2. Diagrammatic representation of the effect of atrial contraction (A) atrial relaxation, (B) and ventricular contraction, (C) on closure of the atrioventricular valves. See text for further discussion.

and a single first sound can also be confused with a split first sound. Ejection sounds can be recognized by being louder over the base of the heart where the first sound is soft. Pulmonic ejection sounds also tend to be reduced in intensity during inspiration.

(Continued on next page)

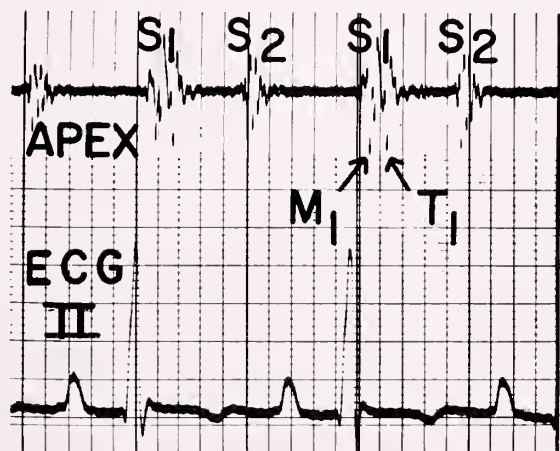


Fig. 3. Apex phonocardiogram showing normal splitting of the first sound. Mitral (M) and tricuspid (T) components of the first sound are labeled.

Wide splitting of the first heart sound occurs frequently in complete right bundle branch block. In this condition, activation of the right ventricle is delayed due to the interruption of the conduction pathways. As a result, closure of the tricuspid valve occurs later than normal and produces the wide split. With incomplete right bundle branch block splitting of the first sound usually does not occur. In complete left bundle branch block, the first heart sound is rarely, if ever, split and usually is perceived as a soft, slightly delayed sound. This is thought to result from a slower than normal rise in left ventricular pressure. The second heart sound in this condition characteristically shows a reverse or paradoxical split that closes with inspiration. A second condition that sometimes produces a widely split first sound is an atrial septal defect. When this type of splitting occurs, the tricuspid component is frequently accentuated. A split of this kind is particularly apt to occur if some degree of right ventricular failure has occurred. In this circumstance the delay in tricuspid closure results from the increased volume load on the right ventricle and the increase in the ejection time from that side of the heart. The first heart sound in isolated tricuspid stenosis is usually accentuated due to an increase in the intensity of the tricuspid component. This part of the sound may also be delayed slightly due to an elevation in right atrial pressure so that the first heart sound may appear to be split.³

INTENSITY OF THE FIRST SOUND

The intensity of the first heart sound is related to the vigor of ventricular contraction and the mechanism of closure of the atrioventricular valves. If the normal positioning of the valve cusps does not occur prior to ventricular contraction, the valves will close from a wide open position with the onset of systole and a loud first sound will result. This type of closure is similar to the slamming of an open door by the wind and is accompanied by an appreciable flow of blood back into the atrium. This mechanism offers an explanation for the loud first sound that occurs in ventricular premature beats and in such high output states as fever, excitement, thyrotoxicosis, and left-to-right intracardiac shunts. In these latter conditions, appreciable ventricular filling continues throughout diastole and the atrioventricular valve cups are held in the open position and are not moved toward closure after atrial systole. The increase in ventricular contraction force associated with these conditions also contributes to the loud first sound.²

The normal presystolic positioning of the atrioventricular valves requires that the interval between atrial and ventricular contraction be of sufficient duration to permit optimal movement of

the valve cusps. If this interval is too short there will not be sufficient time for positioning to occur. If the interval is too long, the valves will tend to reopen under the influence of normal venous return. In either case, the valves will close from the open position and a loud first heart sound will result.⁴ This mechanism is illustrated in Figure 4 where the intensity of the first sound recorded from two patients with varying degree of block of the atrioventricular node is plotted against the corresponding P-R interval from the electrocardiogram. The first sound is clearly loudest in these patients when the P-R interval is less than 0.16 seconds or more than 0.64 seconds.

The marked decrease in the intensity of the first heart sound as the P-R interval increases from 0.14 seconds to 0.24 seconds in Figure 4 illustrates a clinical method for evaluating a delayed atrioventricular conduction. This can be helpful, for example, in acute rheumatic myocarditis where first degree block often occurs. A soft first heart sound in this condition would suggest that atrioventricular conduction was prolonged. On the other hand a normal conduction time is probably present if the first sound is sharp and louder at the apex than the second sound.⁵ This explanation also underlies the beat-to-beat variation in the intensity of the first heart sound found in patients with complete atrioventricular block. In this case the intensity varies according to the interval between the preceding atrial systole and ventricular contraction. A slow heart rate due to a sinus bradycardia or a constant degree of atrioventricular block will not show this variation because the P-R interval is constant in these conditions. This can be a valuable diagnostic tool.⁶

In atrial fibrillation a mechanism similar to that just described for atrioventricular block also appears to operate. In this condition atrial contraction is abolished and, therefore, cannot act to pre-

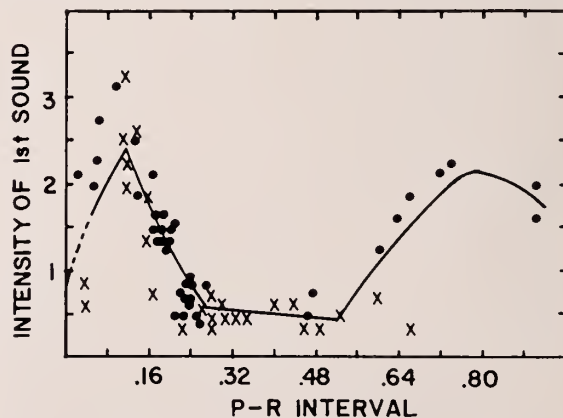


Fig. 4. Plot of the relative intensity of the first heart sound taken from phonocardiograms of two patients with complete atrioventricular block and varying P-R intervals.

position the valve cusps prior to ventricular contraction. As a result they are free to float open or toward closure according to the flow of blood from the atria into the ventricle. Major ventricular filling occurs early in diastole when the blood that has been held in the atrium behind the closed atrioventricular valves during systole rushes into the ventricle. Late in diastole ventricular filling is reduced to the level of venous return. The outcome is a beat-to-beat variation in the position of the valve cusps at the beginning of systole according to the duration of the previous diastole. This produces a variation in the intensity of the first sound similar to that obtained with complete atrioventricular block. This abnormality, however, usually can be distinguished clinically from atrioventricular block by the irregular irregularity of the radial pulse.

In mitral stenosis the first heart sound is characteristically loud and snapping in quality. This frequently is the earliest auscultatory feature of the disease and sometimes can be identified before the usual diastolic rumble is clearly apparent. This change in the intensity and character of the first sound results from the obstruction to blood flow through the mitral valve. This acts to reduce the major flow through the valve orifice that occurs early in diastole and to cause appreciable filling of the ventricle to continue until the onset of systole. As a result the mitral valve is held open until the onset of ventricular contraction and closes with a loud sound. In addition the elevation in left atrial pressure that follows mitral valve obstruction tends to delay closure of that valve. The result is a tendency for the mitral component of the first heart sound to be delayed. This sound then fuses with the tricuspid component and the two together appear as a single sound with a loud snapping quality.

CONCLUSION

The clinical art of auscultation requires practice, patience, and an understanding of the physiological mechanisms responsible for the acoustic phenomena of the heart. In this paper the first cardiac sound has been singled out for review, and the effect of various clinical conditions on its timing, intensity, and pitch have been summarized. It is our hope that this discussion will be helpful in the bedside diagnosis of cardiac problems and will make the auscultatory findings more meaningful.

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OPEN HEART SURGERY BY A SIMPLIFIED TECHNIQUE

(Concluded from Page 379)

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PRINCIPLES OF THERAPY IN CEREBRAL VASCULAR DISEASE*

Treatment Program Should Be Based On Appropriate Studies And Tested Techniques

Before I discuss the principles of medical therapy, I should like to play a game. The reader is familiar with the terrible death toll caused by motor accidents. For a moment, stop and think about these deaths and compare them to the deaths caused by cerebral vascular accidents. Is the mortality the same or does one cause more deaths than the other? If you think there is a difference, estimate the degree. Keeping this comparison in mind, think again about motor accidents, and add to this group all other violent deaths, whether due to falls, fires, drownings, firearms, homicides, suicides, machinery accidents, poisonings by solids or liquids, poisonings by gases or vapors, and other accidents. Now compare the mortality rate of this large group to that of cerebral vascular disease. If you have not thought about this before, Fig. 1 may be impressive.¹ The annual death rate due to stroke is almost 4 times that of motor accidents and about 2 times that of all accidents. As the news media stress the problems of accidents, I shall limit my presentation to cerebral vascular disease.

It will be impossible to review exhaustively the vast and oftentimes conflicting literature concerning the therapy of cerebral vascular disease. Unfortunately, many conflicting opinions concerning therapy and treatment programs are available, and one must read quite widely not to be prejudiced by a few articles. Although it will be impossible not to reflect some of my own prejudices, the attempt will be made to present the facts as objectively as possible.

For practical purposes, I will discuss ischemic and hemorrhagic disease separately, but before I discuss either group I must stress that treatment begins with diagnosis, and diagnosis begins with a satisfactory understanding of the functional anatomy of the brain, the usual distribution of the arteries, the basic pathological processes of the central nervous system, and how the central nervous

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system reacts to injury. To use this knowledge a complete history and a physical and neurological examination are a necessity. The *first principle of therapy* is to rule out diseases that mask as cerebral vascular disease.

Although the major causes of ischemic disease are atherosclerosis either with or without thrombosis and cerebral embolism,² and the major causes of spontaneous hemorrhagic diseases are ruptured berry aneurysm or cerebral hemorrhage associated with hypertension,³ rarer causes, some of which are treatable, can produce these conditions. Ischemic disease may be produced by such things as a tumor compressing an artery, septic embolus with early abscess formation, meningovascular syphilis, arteritis related to pyogenic or tuberculous meningitis, malaria, lymphoma, collagen disease, polycythemia, trauma to the neck, hematological disorders, dissecting aortic aneurysm, radiation, and tentorial, foramen magnum and subfalcine herniations.² Clinically spontaneous hemorrhagic disease may be produced by unrecognized trauma, anticoagulant therapy, erosion of a vessel by a tumor, arteriovenous malformation, mycotic aneurysm, collagen disease, and blood dyscrasia,² etc. Therefore, the *second principle of therapy* is to be aware of, diagnose, and treat the rarer causes of cerebral vascular disease (especially those that are specifically treatable).

One must be aware that cerebral vascular disease may be associated with other diseases. Atherosclerosis of the vessels supplying other organs, e.g., the heart and kidneys, diabetes mellitus, hypertension, renal disease and heart disease are some of these.⁴⁻¹² These diseases must be recognized and treated for proper care of a stroke patient. The *third principle of therapy* is to diagnose and treat associated disease.

In addition to the first three principles of therapy, one must consider other conditions that might have precipitated the "accident." Cerebral infarction or ischemia may follow any condition that decreases the blood, oxygen, or glucose supply to an area attenuated by atherosclerosis.¹³⁻¹⁶ A cerebral infarction may be secondary to either a drop in blood pressure or embolic phenomena secondary to

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myocardial infarction. Orthostatic hypotension, blood loss, carotid sinus sensitivity, drops in pressure during anesthesia, or any condition producing a precipitous drop in blood pressure can cause an infarction. Severe anemia, hypoglycemia, or any condition associated with reduced oxygen-carrying capacity of the blood may contribute to the development of an infarction. Therefore, the *fourth principle of therapy* is to *diagnose and treat diseases that may precipitate a cerebral vascular accident*.

Only after one has adhered to the first four principles of therapy is one ready to discuss the treatment of the specific insult; and even at this point, we are not ready to talk specifically about ischemic and hemorrhagic disease. The complications of bed rest and inability to handle secretions cause most of the deaths in patients with cerebral ischemic disease and contribute significantly to those who die with intracranial hemorrhage. These complications include genitourinary tract infections, pneumonia, thrombophlebitis, decubiti, and other intercurrent infections. They may be largely prevented by intensive nursing care, careful maintenance of fluid and electrolyte balance, rigid adherence to good supportive therapy and immediate passive physical therapy.¹⁷⁻¹⁸ In ischemic disease, unless contraindicated, active physical therapy should be started as soon as the patient can cooperate.¹⁹⁻²¹ The physician must aboveall be a total doctor and use all of his training to guide his program and must recognize complications early and treat them vigorously. In patients who have language disturbances, personnel and relatives should be instructed in the importance of attempting to communicate with the individual so that there is stimulation from the environment that encourages the patient to regain skills lost by the insult.²² Many physicians have become disillusioned by the failure of many types of so-called specific therapy that have been touted and have resolved themselves to the defeatist attitude that stroke is untreatable. I believe they are correct if by treatment they mean reading the Physicians' Desk Reference to find a specific therapy after a laboratory report has made the diagnosis. To me, the greatest challenge and reward in therapy is to use medical skills to decrease morbidity and mortality by good total care of the patient and to prevent complications, or to recognize and treat them early. This is indeed a challenge to a physician. The *fifth principle of therapy in cerebral vascular disease* is to *devise a total treatment program to prevent, recognize and treat complications associated with bed rest*. The *sixth principle of therapy* is to *obtain maximum function of residual abilities*.

At this point, after the first six basic principles

of therapy have been initiated, we are ready to discuss specific treatment. In this discussion it will become obvious that, if all therapies that have been reported were indeed of value, there would be no need for this paper as cerebral vascular disease would be no longer a problem. Therefore, before the discussion begins, we must again stress proper scientific evaluation of proposed treatments.

SPECIFIC THERAPY — INTRACRANIAL HEMORRHAGE

Subarachnoid Hemorrhage Related to Berry Aneurysm: Subarachnoid hemorrhage secondary to a ruptured aneurysm has been treated with hypothermia,²⁰⁻²⁷ hypotensive agents,²⁸⁻³² carotid ligation,³³⁻³⁸ and various types of intracranial surgical approaches.³⁹⁻⁴⁹ Recently a pilot study has suggested that epsilon aminocaproic acid, an anti-fibrinolytic agent, may be of value.⁵⁰ If one of these articles was selected at random, a casual reader might be convinced that it described the best treatment available. Unfortunately this vast mass of literature has not been submitted to rigorous scientific evaluation, and as yet we do not know the ideal form of treatment. McKissock and his group were the first to perform a controlled scientific study.⁵¹⁻⁵² A well-designed controlled co-operative study sponsored by the National Institutes of Health has been established to study bed rest, hypotension, carotid ligation, and intracranial surgery.⁵³ Although many institutions are cooperating in this study, after five years no clear-cut preference has been published by this group. We may assume after this length of time that the best treatment will not be too greatly different from the others; otherwise a decision would have been made earlier. It may be that no single form of therapy will be ideal for all locations of aneurysm and all time intervals after the initial bleeding. Epsilon aminocaproic acid is mentioned only in passing as it has not yet been submitted to rigorous controlled study. The data reported by Sahs from the National Institutes of Health Cooperative Study of Intracranial Aneurysms and Subarachnoid Hemorrhage revealed such an extremely poor prognosis for patients treated with hypothermia that further studies are probably not indicated.³²

(Continued on next page)

**FIGURE 1
U.S.A. DEATHS (1966)**

CVA	204,841	
Motor Accidents	53,100	(26%)
All Accidents	112,000	(55%)

INDIANA DEATHS (1965)

CVA	6,171	
Motor Accidents	1,535	(25%)
All Accidents	3,655	(59%)
Poisoning		
Suicide		
Homicide		

Cerebral Hemorrhage Associated with Hypertension: The mortality rate of this serious condition may exceed 90 per cent.¹⁷⁻⁵⁴ In the acute stage intracranial surgery is of little value. Evacuation of an intracerebral hematoma is definitely indicated if the patient survives the initial episode and the hematoma is large enough to cause actual mass compression or if it progresses.^{51-2,55-6}

Meyer and Bauer evaluated hypotensive therapy during the acute stage by a controlled study.²⁸ They reported statistically significant decreases in mortality in the treated group. Therefore, it would seem that hypotensive agents should be used in this condition.

Although the outlook for therapy of cerebral hemorrhage related to hypertension is dismal, data from several sources indicate that the incidence of cerebral hemorrhage is decreasing and that this may well be related to antihypertensive drugs.⁵⁷⁻⁵⁹ Aurell and Hood demonstrated a significant decrease in cerebral hemorrhage and an increase in the average age of individuals experiencing hemorrhage after the advent of good antihypertensive therapy.⁵⁸ One must be cautious in drawing conclusions as to cause and effect, but there may be a relationship. It is advisable to treat gradually, since a rapid drop in blood pressure may precipitate ischemic disease.

I shall not discuss arteriovenous malformations and the rarer causes of intracerebral hemorrhage.

SPECIFIC THERAPY — ISCHEMIA AND ISCHEMIC INFARCTION

Cerebral embolism is usually secondary to extracranial disease. The diagnosis is based on the evidence of sudden cerebral dysfunction in an area supplied by an artery and the ability to demonstrate either a source capable of producing emboli, or evidence of embolic phenomena elsewhere, or both. Cerebral embolism may occur in association with atrial fibrillation or other arrhythmias, myocardial infarction with mural thrombus, acute or subacute bacterial endocarditis, heart disease without arrhythmia or mural thrombus, cardiac surgical procedures, nonbacterial thrombotic endocardial vegetations, paradoxical embolism in congenital heart disease, atherosclerosis of the aorta and carotid arteries, fragmentation of thrombi in cerebral arteries or in pulmonary veins, air emboli following trauma to lung or neck or following decompression, and fat emboli associated with fractures of marrow bones.² The ideal treatment for this condition insofar as is practicable is preventive. In all cases, the primary condition should be treated. Although the causes of infarction may be different, the results of actual brain tissue death produce problems requiring similar treatment. Therefore, the specific treatment for the infarction of the

brain will be discussed with ischemic disease associated with atherosclerosis.

Countless specific forms of treatment for ischemia and ischemic infarction have been reported. It will be impossible to review the vast number of types of therapy that have been reported as being ideal but have ultimately been proven to be of no value or have been dropped by general consensus. Some of these will be mentioned in passing and some in more detail.

Treatments Assumed to Increase Cerebral Blood Flow: Before Kety and Schmidt devised the nitrous oxide technique using the Fick Principle actually to measure cerebral blood flow, many drugs and procedures were advocated for this purpose. Such drugs as aminophylline, nitrites, adrenalin, benadryl, nicotinic acid, alcohol, and histamine were all proposed on this basis, but none actually increased cerebral blood flow.^{60,61} At one time bilateral stellate ganglion block was popular on the assumption that it alleviated cerebral vascular spasm and increased cerebral blood flow.⁶²⁻⁶⁵ In most cases of ischemia, either with infarction or transient, vasospasm is not a major factor.^{66,67} None of these drugs or procedures has been shown to be of any value in any scientifically valid study.

The most potent agent to increase cerebral blood flow is carbon dioxide. Some reasoned that since cerebral ischemic disease was related to decreased blood supply carbon dioxide inhalation might be the therapy of choice.⁶⁸ A major defect in this reasoning is a failure to recognize that in an area of absent or decreased blood flow the carbon dioxide tension is already much higher than could possibly be created artificially.⁶⁹ Hedt-Rasmussen et al. reported a luxury perfusion syndrome: which was described as hyperemia in regions with an adequate local arterial pressure and with increased carbon dioxide tension.⁷⁰ Carbon dioxide therapy was tested clinically by Millikan. Although this was not a random study, it did compare a treated group to a comparable untreated group; he found no significant difference in results between the two groups.⁷¹

Papaverine increases cerebral blood flow.⁷² Meyer and his group compared patients treated by intravenous papaverine with controls.⁷³ A significant functional improvement in the treated group was noted, but there was no difference in mortality. Unfortunately, although objective tests were used, the scorer was not blinded as to which group received the drug and which received placebo.

Steroids: Steroids were reported as producing excellent results in an uncontrolled study.⁷⁴ A controlled study was repeated, and the patients in the cortisone group actually had a trend toward in-

creased mortality.⁷⁵ However, the exceptional patient with a large infarction with edema causing increased intracranial pressure might benefit from parenteral steroids.

Anticoagulants: Many papers have been written concerning the efficacy of anticoagulant therapy. To my knowledge at least five large well-designed controlled studies have been performed.⁷⁶⁻⁸² All five come to essentially the same conclusions: that there tends to be an increase in mortality in all types of ischemic disease treated by anticoagulants on a long-term basis and a decrease in the number of episodes of transient ischemic attacks. Possible benefit in evolving infarction was described. Despite this, Pearce et al. found no difference in transient ischemic attacks in their study of control versus treated groups.⁸³ Individual investigators have reported controlled studies where there is a suggestion of favorable results in very-long-term therapy for six months to a year after infarction or in association with embolic phenomena.^{84,85} It is apparent that, if this therapy has any value at all, it is not clear-cut. My personal conclusions from these studies are that I will not treat a patient with infarction with anticoagulants at any time. I will consider treating patients with transient ischemic attacks if they are so frequent that they interfere with activities of daily living, and then only when the patient agrees to take the increased risk.

Fibrinolytic Agents: Although theoretically of value,⁸⁶ Meyer et al. showed that they were dangerous clinically.⁸⁷ They reported a significantly higher death rate in 37 treated patients as compared to 36 controls.

Estrogens: McDowell et al. in a controlled study using Premarin® demonstrated that the treated group did worse than the controls.⁸⁸

Hydrogen Peroxide: Urschel reported a single individual with basilar artery insufficiency treated with intra-arterial hydrogen peroxide.⁸⁹ Early angiographic and clinical improvement was maintained after a six month follow-up. Further studies are necessary.

Surgery: The value of surgical treatment of atherosclerotic lesions in the extracranial portions of the carotid and vertebral arteries is still in the process of evaluation. Some authors report the results of surgical therapy in many hundreds of patients and others in as few as one. Almost all are merely skilled technical feats, for as yet there is no scientific study which objectively compares the results of surgery and medical therapy.⁹⁰⁻⁹⁵ Unfortunately the criterion of re-establishment of the lumen in a diseased vessel and a good blood flow at the time of operation is not an adequate criterion of success. A cooperative scientifically valid

study supported by the National Institutes of Health is in process to compare surgical versus nonsurgical treatment.⁹⁶ To my knowledge to this date no clear-cut preference between medical and surgical treatment has been reported.

If isolated atherosclerosis in a single vessel precipitates disease, it is only a contributor since there is good evidence that in a healthy young individual a vessel may be occluded with no change in clinical findings.^{33-38,97} Faris et al. performed trans-brachial percutaneous angiograms on 43 healthy male prisoner volunteers and found that 53.6 per cent demonstrated some type of arterial lesion, and 23.2 per cent had more than one artery affected.⁹⁸ No significant difference from a group of 68 male patients with cerebral vascular insufficiency was noted. Although many of us think that extracranial vascular surgery may have a place, this has not been determined.

Clofibrate: Although the presence of elevated cholesterol and other lipids has not been clear-cut in patients with cerebral vascular disease, recently there has been some interest in the possibility that these drugs will decrease atherosclerotic disease. Acheson and Hutchinson reported a preliminary study comparing patients with cerebral vascular disease who received clofibrate to a control group.⁹⁹ A total of 106 patients was studied. No significant difference was obtained, although there seemed to be a trend for decreased recurrence of disease in those treated. A double-blind controlled study might soon be initiated to evaluate the long-term benefit of this drug.

Hypotension: The dangers of a sudden drop in arterial blood pressure have been described, and the value of hypotensive medication in cerebral hemorrhage related to hypertension has been noted. Although at first it may seem inappropriate, we must now discuss hypotensive therapy in ischemic vascular disease. Meyer et al. have demonstrated in hypertensives that cerebral blood flow was increased by decreasing arterial blood pressure.¹⁰⁰ A double-blind controlled study has been initiated to compare patients with cerebral vascular disease who are treated by hypotensive agents with those who are not.¹⁰¹ In 1964 John Marshall compared 39 hypertensive patients treated with hypotensive agents and compared these to 42 control patients.¹⁰² All were treated after a non-embolic infarction. Statistical analysis revealed a significant decrease in further cerebral vascular accidents in men and a trend for a decrease in further accidents in women. These studies suggest that hypertensive patients who have ischemic cerebral vascular disease should be treated cautiously with antihypertensive medication. The drop in arterial pressure should be done gradually and maintained over long periods.

(Continued on next page)

PHYSICAL MEASUREMENTS AT AGE TWENTY-TWO AND NINETY-FOUR COMPARED

Rare Opportunity Presented To Make Comparison In A Healthy Male

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It is a rare opportunity to be able to compare certain physical measurements of a vigorous white male, aged ninety-four, who continues to play golf, drive his own automobile, and take an active interest in the intellectual and social life of his community, with those same measurements taken seventy-two years earlier at the age of twenty-two. He was then involved in athletics at the Young Men's Christian Association in Boston. The records made at that time were recently re-discovered in his personal papers. The same measurements were recently repeated, and are here reported:

Measurements	1896	1968	Change*
Age	22.2	94	+
Weight	166.3	177	+
Height	69.5	68.6	—
Neck	14.5	14.4	0
Br'dth of sh'd'rs	15.9	15	—
Br'dth of chest	11.2	12	+
Depth of chest	8.4	10	+
Chest contracted	37.2	37	—
Chest expanded	39.7	39	—
Waist	31.2	37	+
Hips	33.4	40	+
Right arm, up	12.8	11	—
Right arm, down	11.3	10.5	—
Right arm, forearm	11.4	9	—
Left arm, up	12.4	11	—
Left arm, down	10.8	10	—
Left arm, forearm	11	9	—
Right thigh	22.2	19	—
Right calf	14.3	13	—
Left thigh	22.2	19	—
Left calf	14.3	13	—

*Legend: (+) increase; (—) decrease; (0) unchanged

COMMENT

As has frequently been rescribed, there is with age a definitive shortening, as seen here in the reduction in height from 5'9½" to 5'8½". There is a contraction in the breadth of the shoulders, expansion of the breadth of the chest, and expansion of the depth of the chest. The "middle-age" waistline has persisted, with a characteristic widening of the pelvic girdle. This is conspicuous, and represents a thirty-three-and-one-third per cent increase. General loss of muscle mass despite continuing exercise is seen in the measurements of the arms and thighs.

In view of this man's rather superb health at age ninety-four, and his life-long freedom from disease, these statistics have a unique significance not obtainable by large samplings, among those in the tenth decade, or by comparison with a group of infirm persons in the same age group.



PRINCIPLES OF THERAPY IN CEREBRAL VASCULAR DISEASE

(Concluded from previous page)

To conclude the discussion of specific therapy it seems obvious that the *seventh principle of therapy* is that *no treatment program that could conceivably be of harm should be initiated unless well-designed scientific studies have shown the treatment to be of value when tested by recognized statistical techniques.*

SUMMARY

The seven principles of therapy in cerebral vascular disease are:

First Principle: Rule out diseases that mask as cerebral vascular disease.

Second Principle: Be aware of, diagnose, and treat the rare causes of cerebral vascular disease (especially those that are specifically treatable).

Third Principle: Diagnose and treat associated disease.

Fourth Principle: Diagnose and treat diseases that may precipitate a cerebral vascular accident.

Fifth Principle: Devise a total treatment program to prevent, recognize, and treat complications associated with bed rest.

Sixth Principle: Obtain maximum function of residual abilities.

Seventh Principle: No treatment program that could conceivably be of harm should be initiated unless well-designed scientific studies have shown the treatment to be of value when tested by recognized statistical techniques.

REFERENCES

Because of space limitation the 102 references listed are not published. However, they are available on request to this Journal.

1100 W. Michigan Street,
Indianapolis, Indiana 46207

FLURANDRENOLONE TAPE THERAPY

Represents A Definite Advance In The Management Of Certain Cuta- neous Disorders

Flurandrenolone acetonide (Cordran®)*, a topical corticosteroid, has been incorporated in a transparent impervious plastic surgical tape made of a thin, matte-finish polyethylene film, slightly elastic and highly flexible. The flurandrenolone content of the tape is 4 micrograms per square centimeter. In this study the tape was applied at bedtime and removed in the morning. Of 126 miscellaneous dermatoses so treated since December 1966, none showed a reaction preventing continuation of treatment.

A most remarkable favorable response was obtained in *neurodermatitis circumscripta* (*lichen chronicus Vidal*) with lichenification. In 18 cases, 16 or 88 per cent, responded very well. The itch-

FRANCESCO RONCHESE, M.D., of Providence, R.I. Clinical Professor of Dermatology, Emeritus, Boston University Medical Center; Formerly Chief of Dermatology, Rhode Island Hospital, Providence.

ing subsided, and the lichenification gave way to a skin very close to normal. The change took place in one or two weeks. In 3 cases the skin remained well many months.

A second disorder which showed a most remarkable response to tape therapy is the *finger tip fissure or fissures* which often harass the manual worker, the surgeon, the nurse, or the housewife. Their nature is idiopathic, perhaps psoriatic. In 25 cases, 18 or 72 per cent, the fissures disappeared overnight. The recurrences were mild and quickly corrected by reapplying the tape. In the other cases either the therapy was not effective or the patients did not return for a checkup. Some of the non-returning patients may be considered as failures, since it was rather easy for them to return and request an additional amount of tape.

*Kindly furnished by E. Linn Jones, M.D. of the Medical Research Division of Eli Lilly & Co., Indianapolis, Indiana



Fig. 1. At left, *Neurodermatitis circumscripta* on a wrist before starting tape therapy. At right, the same area 4 months later. No recurrence so far. The patient returned the unused tape "for other patients to use."



Fig. 2. Finger tips fissures. No recurrence for one year.

The third disorder to show a favorable response was *psoriasis*, the inveterata type with patches 3 to 4 cm. in diameter on knees and elbows. Of 20 cases, 10 or 50 per cent, responded well in the sense that the lesions stayed satisfactorily clear for from 3 to 4 days. This can be considered a favorable response.

In 2 cases of *psoriasis of the knuckles with fissures* the result was very satisfactory.

The patients' satisfaction was shown by such expressions as: "Give me more of the magic tape," and "I will not be able to live without it." The fact that it could not be purchased was a great disappointment. In the 10 cases in which the result was poor or negative, there was no apparent explanation. The failure can be attributed to the nature of the disease rather than the treatment.

SUMMARY

Flurandrenolone tape represents a definite advance in the management of some cutaneous dis-

orders usually resistant to therapy, such as neurodermatitis circumscripta with lichenification, the idiopathic (perhaps psoriatic) fingertip fissure, and psoriasis in selected locations.

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170 Waterman Street
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Fig. 3. Psoriasis vulgaris inveterata type. At right after 3 weeks of tape therapy. The improvement was only temporary.

WHERE DO WE GO? HOW DO WE GET THERE?*

Every Child Has An Inherent Right To The Best In Health Care

It has been said that the child is father to the man, that an ounce of prevention is worth a pound of cure, that a stitch in time saves nine. For many children in our nation these adages do not apply.

At this point in time some children who are hungry can eat, but not all; some children can learn to their full potential, but not all; some children who require medical care can receive it, but not all; some children who require comfort can receive it, but not all.

If, as it has been said, the squeaky wheel gets the oil, then our voices must now be raised loud and clear, so that a child should not only be seen and heard, but listened to. This is the purpose of this presentation.

MAGNITUDE OF THE PROBLEM

At the present time it is estimated that as many as 500,000 children in this country suffer from psychoses and borderline psychotic conditions. Of the 50 million school-age youngsters, various surveys conducted through school systems provide us with some estimate of how many children may really need mental health care. Several of these surveys indicated that approximately 2 to 3 per cent of the school children are in need of direct psychiatric care and an additional 7 per cent of some help for emotional problems. Other estimates have suggested a rate of 7 to 12 per cent. If we assume the more conservative figure of 2 per cent, one million children needed psychiatric care. Data available in relation to school age children suggest that 30 per cent of elementary school children present some problems of maladjustment, but most of the problems are not severe enough to require clinical attention. Of that 30 per cent, about 9 per cent present problems severe enough to justify clinical attention, but only 2 to 3 per cent are actually referred to clinical facilities.

Available data indicate that 465,000 children under the age of 18 were served in psychiatric facilities in the United States during 1966. Eighty-six per cent of these were seen on an outpatient basis, and 14 per cent were hospitalized. Of the latter group about 50 per cent went to public mental hospitals and 50 per cent to general hospitals.

The total number of children seen on an outpa-

MEYER SONIS, M.D. of Pittsburgh, Pa. Chief and Professor of Child Psychiatry, Department of Psychiatry, University of Pittsburgh School of Medicine.

tient basis in 1966 was about 400,000, with only one in three receiving more than a diagnosis. Of these 400,000 52 per cent were new admissions to the clinic, 5 per cent were readmissions, and the remaining 43 per cent had been on the clinic rolls from the preceding year.

Very little data are available on the number and characteristics of patients served in private psychiatric practice. A sample survey indicated that 4 per cent of the approximately 750,000 patients seen in private practice, or 30,000 children under 15 years of age, receive these services annually.

Among 15 million youngsters in the United States who are being reared in poverty, one out of three have serious emotional problems that need attention.

More than 500,000 youngsters are brought before the courts each year for anti-social acts. It is estimated that one-third to two-thirds of this group eventually become recidivists. If present trends continue, one in every nine youngsters will appear before Juvenile Court before the age of 18.

Suicide is believed to be the fourth ranking cause of death among 15 to 19 year olds. Adolescents of college age present the highest potential suicide risk group in the population.

The number of children and adolescents admitted to resident mental hospitals is increasing more rapidly than their increase in the population. Projections for the decade 1965 to 1975 indicate a 10 per cent population increase of children under the age of 18. If current patterns persist, the number of these children in mental hospitals will more than triple.

Whether these statistics are an underestimate or overestimate of the reality, they still tell only a part of the story. Perhaps even more frightening is the fact that, if the records of all children actually seen in psychiatric facilities were examined, we would find that 50 to 60 per cent of them manifested behavioral symptomatology antedating the referral by years and symptoms which were emerging under the very eyes of responsible persons in the child care professions.

A VARIETY OF DISORDERS

We are concerned here with approximately 30 to 40 per cent of our national population. Within
(Continued on next page)

*Presented at Emma Pendleton Bradley Hospital, East Providence, R.I., February 14, 1969

this group of children, we are concerned with those who live in poverty, with poverty defined as a place from which is bred the three or four generation disease of social deprivation, lack of sensory stimulation, hopelessness, and symptoms of physical and psychological disease. We are concerned with those children born with congenital defects, who are now able to survive as a result of medical advances but who survive with physical handicaps, problems of rehabilitation, and emotional exhaustion of a family. We are concerned with those born with brain damage related to poor prenatal care, but with brain damage that will bring with it psychological problems and problems which may interfere with the constructive rehabilitation of the child. We are concerned with those in need of long-term rehabilitation as a result of chronic disabilities brought on by neurological disorders, cystic fibrosis, rheumatoid arthritis, diabetes, and other chronic disabling diseases of children, but diseases which also bring with them psychological symptoms and breakdown of families. Of children under five years of age, we are concerned with those who will die as a result of accidents which can be related to the child rearing atmosphere — the child who takes poison which should have been out of reach, the child who is left unguarded in a hazardous area, and the child who is beaten. We are concerned with those in foster homes, ostensibly for neglect, but with a high proportion showing behavioral symptoms. We are concerned with those children in need of recreational outlets, specialized tutoring, vocational guidance, and parental support. We are concerned with those children requiring a headstart, or a new start, or a creative start.

About 3 per cent of the babies born each year are classified as mentally retarded. More than 4,000 of these babies are doomed to a lifetime of dependency. The United States stands fifteenth among the nations of the world in infant mortality. Our 30 million poor account primarily for our unfavorable position. An infant born to poor parents has twice the chance, of an infant born of middle class parent, of dying before reaching his first birthday. If he survives the first year of life, his chance of dying before reaching the age of 35 is four times greater than that of the rest of us. Forty-five per cent of the women who give birth to their babies in public hospitals in the United States have had no prenatal care. Poor families have three times more disabling heart disease, seven times more visual impairment, and five times more mental illness than do the rest of us. It is estimated that 1.5 million children have hearing impairments requiring care and 10.2 million defects requiring eye care. From recent studies on hunger in the United States, it appears that the most

prevalent, or at least the most recognized, manifestations of malnutrition in the United States are the nutritional anemias of infancy and childhood. It has been estimated that the incidence of iron deficiency anemia among children from poverty backgrounds varies from 30 to 70 per cent.

INADEQUATE COMMUNITY RESOURCES

What has been done in light of these data? Examination of the public record, insofar as support of children through allocation of funds is concerned, and also provision of facilities and programs designed specifically for them, would reveal a painful situation. Studies conducted by the Joint Commission on Mental Health of Children to be published by them, and public data which are available, confirm these facts. For example, in the Commonwealth of Pennsylvania, of the total budget allocated for State Mental Health Facilities in 1966, 1967, and 1968, 5 per cent, 5.8 per cent, and 5.8 per cent respectively was allocated for children's services. Data from other states suggest that an average of 10 per cent of total mental health funds was allocated for children. The number of states which have separate facilities for the treatment of the mentally ill child is quite small, and the number of existing mental health centers with a distinct children's service is also quite small.

Further to answer the question "What have we done?" let us turn to an examination of the community, its resources, the professions, and the system of health care. Experience to date suggests that our estimates of the number of children requiring psychiatric clinical services are crude and may be an over- or under-estimate of the size of the problem we face. Though most of the states in our nation have completed comprehensive mental health planning, and are now in the midst of comprehensive health planning, there is as yet much variance of judgment on the base rate to be utilized. The lack of agreement within the mental health professions and services as to terms, definitions, and frames of reference in collecting data has made it impossible to arrive at valid comparisons. In addition, with existing patterns of service it is entirely possible that the same child is being counted a number of times while at the same time other children, such as might be seen in a family agency, pediatric hospital, general hospital or practitioner's office, are not being counted at all. The problem is further compounded by the fact that there are many more inquiries to available resources than the number of cases actually seen. The demographic and epidemiological data reflect only the numbers of those children who have actually been cared for.

(Continued on Page 397)

Editorials

Guest Editorial

IS NURSING RELEVANT?

This question has long plagued the members of the so-called "nursing team" as well as their colleagues in the over-all health field. The traditional image of a "nurse" is no longer valid, and all of us involved in the delivery of quality nursing and para-medical services to people are caught in a most critical and challenging current as the evolutionary development of contemporary comprehensive health planning and implementation takes place. If we are adequately to meet our responsibilities to society in this area, the approach to modern nursing must become more solidly based on sound principles of education and training, and be reorganized for more efficient utilization of personnel. Nursing activities are increasingly encompassing a broader spectrum of human encounters and endeavors. Nursing leaders have recognized that improved educational preparation for all kinds of nursing personnel is the dominant force in the maintenance of quality nursing practice through more beneficial and effective human interaction, technical skill, theoretical knowledge, and professional leadership and support.

The American Nurses Association has proclaimed its philosophy that "education for those who work in nursing should take place in institutions of learning within the general system of education." In the foreword to the A.N.A.'s first *Position Paper* on the educational preparation for nurse practitioners and assistants to nurses, it states that the pace of the expansion of scientific knowledge is accelerating, resulting in changes in health care concepts and therapies at a rate far more rapid than at any previous time in history. The organization affirms

its belief that unless all nursing education is upgraded, nurses will be handicapped in efforts to provide patient care commensurate with society's changing needs and demands. It states that the implications of the *Position Paper* reach far beyond nurses and nursing. Such a position involves high schools, colleges and universities, hospitals, physicians, and other health practitioners. It looks to other professional health care disciplines for cooperation and collaboration in bringing about the changes that will ultimately result in better nursing care to the public and better prepared nurses for the health and nursing teams.

The pattern of preparation which the A.N.A. has advocated is intelligent, sound, and logical. In essence it provides for a nursing team composed of three kinds of nursing service personnel — *the professional nurse*, whose minimum preparation for beginning professional nursing practice should be a baccalaureate degree in nursing; *the technical nurse*, whose minimum preparation for beginning technical nursing practice should be associate degree education in nursing; and *assistants to nurses*, whose preparation should consist of short, intensive preservice programs in vocational education institutions, rather than on-the-job training programs.

There is no doubt that the implementation of this courageous plan of vision and hope will be most effective in solving the dilemmas of nursing today and in rendering nursing truly relevant in our times.

SISTER MARY AUGUSTINE SAN SOUCI, R.S.M.
President
Rhode Island State Nurses' Association

ADEQUACY OF PSYCHIATRIC TREATMENT*

The definition of the term "adequacy," when applied to psychiatric treatment, is something that will usually produce a lively debate within a group of psychiatrists, because it is likely to mean so many different things to different people. The question of definition was given some urgency in 1966 when the U.S. Court of Appeals for the District of Columbia Circuit ruled that a person committed to a mental hospital by the court had a right to "adequate" treatment and that the court had a right to determine whether treatment was indeed adequate. The practice of psychiatry has not yet evolved into enough of a science for us to have anything approaching an absolute measure of adequacy. The hospital has its diagnostic hardware

for testing and measuring many kinds of bodily function down to the last cubic centimeter, and this stands as a concrete symbol of scientific certainty and predictability. But this kind of equipment is not of much help to the psychiatrist as he attempts to evaluate psychopathology. There is no way to measure the depth of depression, for example, or the degree of withdrawal of a schizophrenic patient from reality. Instead, the psychiatrist must rely on his experience, training and intuition, which are imprecise instruments at best, so that it is not uncommon for two or more competent professional people to draw two quite different conclusions about a given patient and the best treatment for him.

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In trying to come to grips with the concept of adequacy, then, the problem is multiplied many times over because "adequacy" will depend so largely on who is defining it. The therapist will feel that treatment has been adequate if he has been able to see a beneficial change in the thought and behavior of his patient, and if his patient is able to get along in a way that is more comfortable to himself and more acceptable to society. But others might have entirely different ideas about adequacy, depending on their expectations. The patient's family may expect that he be made loving and docile; the referral source may expect that he be converted into "a law-abiding citizen;" the patient himself may expect something entirely different. Each may feel that treatment has been inadequate if the end result fails to meet these expectations.

Within this welter of diffuse expectations must be constructed the concept of adequacy, and it must be done with relative terms. Despite the wide variation in ideas, there are certain basic points that nearly everyone would agree to. For example, all would agree that the purpose of treatment must be considered before drawing conclusions about its adequacy. The services offered on a continued treatment ward in a large public hospital would probably be quite inappropriate in the acute psychiatric wing of a metropolitan general hospital.

Each has its own place and its own purpose, and its adequacy must be judged with this in mind. Also, everyone would agree that there should be

some attempt being made to interrupt the disease process in the patient. Precisely what this is will depend on diagnostic evaluation, which must be kept up to date so that the treatment will change as the patient's needs change.

Within this context, treatment can take many forms. It may involve physical therapies, such as electroshock treatment, it may involve individual psychotherapy or medication or any combination of these. Where patients are treated with skill and concern, and with the expectation that they will improve, good things are likely to happen to them almost regardless of the philosophy behind treatment. For this reason, no measure of adequacy can be complete without some evaluation of the kinds of encounters that occur between hospital employees and patients. Every employee has the opportunity to have some effect on the patient's illness, for better or for worse, and the most adequate treatment program is the one that exploits this to the full, taking advantage not only of the highly trained professional staff, but also of the other kinds of employees who are called on to deal with patients from day to day.

For various reasons, then, it is obvious that there are no precise guidelines available to help the courts to construct a definition of "adequacy."

JOSEPH J. BAKER, M.D.

*Abstract of comments by Dr. Joseph J. Baker at Seminar on "Concepts of Adequacy of Psychiatric Treatment" at University of South Carolina Law School, Columbia, South Carolina, March 28, 1969.
... The Editor

MEDICAL WRITING

Experts have disparaged much medical writing for its repulsive qualities of monotony, verbosity, and jargon; sheer clumsiness of expression, and lack of clarity. If doctors' livelihoods depended on their literary efforts they would starve. And precisely here lies the chief difficulty. For doctors are not so dependent. Their writing consequently reflects their lack of skill. Writing has become an undervalued art in the life of most physicians otherwise beset with demands of patients. However, there is no right to foul the medical literature.

Doctors Lester King and Charles Roland, senior editors of JAMA, have provided the indictment of medical writing offered in the first sentence above. In a little paperback book, "Scientific Writing," issued by the American Medical Association, they present suggestions for management of the medical paper. And they are sharp critics, good tutors, and most persuasive in their writing. They are particularly repelled by the passive voice of so-called objective writing, that which is constructed with forms of the verb, "to be" and a past participle. "Sixteen cases were followed, etc." they consider

unclear, dull, and monotonous. They reject the claim that it is the routine mode for expressing scientific information. No flaccid routine for them. These editors are critical and alert to excise redundancy, resolve ambiguity, eliminate prepositions, and replace the indefinite "it" and ubiquitous "is". They refer approvingly to that famous little book, "The Elements of Style" by Strunk and White. E. B. White of *New Yorker* fame says: "There is no satisfactory explanation of style, no infallible guide to good writing;" "Write with nouns and verbs, not with adjectives and adverbs;" and "The approach to style is by way of plainness, simplicity, orderliness, sincerity."

But there are those to whom good advice is nothing more than boredom. Turn then to "Six Honest Serving Men for Medical Writers" by Doctor Richard Asher (JAMA 208:83-87, 1969) who with a little laughter injects his needle quite painlessly. He concludes with Hilaire Belloc's words:

"When I am dead, I hope it may be said: His sins were scarlet, but his words were read."

UNDONE BY UNDER-DONE MEAT

"Under-done," rather than "rare" or "raw," is the description used in many parts of England in giving cooking directions for meat to a waiter or waitress. Severe Group E *Salmonella* infections which appeared in Rhode Island recently in a mother, a two-year-old boy, and a three-year-old sister were shown to be due to *S. heidelberg*, resulting from eating "under-done" barbecued chicken obtained in a neighborhood supermarket. The commonly applied term "supermarket salmonellosis," however, is somewhat unfair since barbecuing is so widely used in poultry shops, in delicatessen stores, and of course in backyards. The recognition that poultry above all is a prime source of meat-borne *Salmonella* infections has led the Rhode Island Department of Health to supervise and inspect carefully all public barbecuing places. The special danger from barbecuing poultry is that

the surface may be well seared, singed and slightly, and appear to be well done, while the interior has not been adequately penetrated. The low interior heat may actually be incubative rather than destructive. Poultry is contaminated with *Salmonella* before it leaves the poultry farm and not by subsequent food handlers. "The under-done meat" may appeal to the appetite, but bacteria causing food infection will be destroyed only if the cooking is thorough.

We commend the Food and Sanitation Section of the Rhode Island Department of Health for its initiative in inspecting and supervising food vendors offering barbecued meat, and especially for its investigation of the recent striking, if isolated outbreak. The report of the cases deserves widespread circulation since the season for outdoor barbecuing is upon us.

WOULDN'T IT BE WONDERFUL?

Wouldn't it be wonderful, if parking areas on the outsides of the city would be set apart for commuters, school people, and other city workers, so that they could travel by bus quickly and directly to and from their desired destinations in the city?

Wouldn't it be wonderful if there were more policemen and if these devoted public servants were better paid, better trained, and encouraged to pursue advanced education in police work, sociology, and other areas pertaining to their profession? This would mean more security for all and more efficient, humane and intelligent handling of the citizen with problems.

Wouldn't it be wonderful if the utilities — telephone and electricity — would declare that from now on all wiring, old and new, would be installed

underground? Then the several yearly breakdowns in these important services due to storms and snows and winds and explosions would be avoided, thereby decreasing maintenance and upkeep, and bringing some joy to the consumers pocketbook. Also, who can forget the desolation caused by the destruction of beautiful trees and foliage two or three times a year to accommodate the wiring which has not been changed or improved in appearance in fifty years.

Wouldn't it be wonderful if the dreaming scientists and politicians, who write and talk so much about how great it will be to live in the year 2000 A.D., would come out of their dreams and face up to the realities of 1969?

Wouldn't it be wonderful?

PARASITIC DISEASE DRUGS AVAILABLE AT NCDC

A Florida dentist upon return from an African safari last November was found to have a form of African sleeping sickness. He was promptly given a drug, Suramin, provided by the Parasitic Diseases Drug Service of the National Communicable Disease Center (NCDC), Atlanta, Georgia. Suramin is one of 10 antiparasitic drugs, either unlicensed or not readily available in this country, which are kept on hand on an emergency basis by NCDC. This is a service which should be known to practicing clinicians.

According to Doctor David J. Sencer, Director of NCDC, the Parasitic Disease Drug Service was established to satisfy the growing demand for such

drugs. As pointed out by Doctor Sencer: "With increasing involvement of Americans in tropical areas, and more sophisticated medical diagnosis, it is likely that the number of requests for antiparasitic drugs will increase."

The Center dispensed drugs 178 times in 1968, its first year of operation. The diseases for which the drugs are used as treatment are all rare in the United States, although many of them are common in other areas, especially the tropics.

Many of the drugs while not licensed in the United States, have been used extensively elsewhere. The Food and Drug Administration permits

(Continued on next page)

the Parasitic Disease Drug Service to supply each drug to requesting physicians on an investigational basis. In many cases, availability of the drug is a matter of life or death to the patient.

The drugs thus far available are:

Astiban, for treatment of schistosomiasis when caused by *Schistosoma hematobium* and *Schistosoma mansoni*. In most cases, Astiban can be given on an ambulatory basis over a short period of time.

Bithionol, for treatment of paragonimiasis, found in Southeast Asia, West Africa, and Northwestern South America.

Dehydroemetine, for intramuscular or subcutaneous use in treatment of severe intestinal amebiasis and extraintestinal amebiasis, i.e., liver abscess. Dehydroemetine is less toxic than emetine, and equally effective.

Mel B, for the treatment of sleeping sickness when there is central nervous system involvement. This disease is prevalent in many areas of sub-Saharan Africa.

Niclosamide for cestode infections due to *Taenia saginata*, *Hymenolepis nana*, and *Diphyllobothrium latum*. This drug can be given to ambulatory patients, and is relatively non-toxic.

Parenteral chloroquine for treatment of pernicious *P. falciparum* malaria in which the strain is

sensitive to chloroquine; and parenteral quinine for treatment of the same infection when the strain is resistant to chloroquine. Both of these drugs are licensed and commercially available in the United States but are sometimes difficult to obtain rapidly.

Pentamidine isethionate for treatment of the early stages of African sleeping sickness due to *Trypanosoma gambiense*; and for *Pneumocystis carinii* pneumonia, a serious infection seen in newborns, debilitated infants, and adults with altered immunologic response (usually in association with a malignancy). This disease, whose epidemiology is not understood, is on the increase. The Service provided drug treatment for over 100 cases in 1968.

Pentostam, for the treatment of leishmaniasis (kala-azar, orietal sore and espundia). These infections occur in many areas of the tropics.

Suramin, for treatment of the early stages of sleeping sickness due to *Trypanosoma rhodesiense* and for treatment of onchocerciasis (usually in combination with diethylcarbamazine).

Telephone inquiries should be made to the Parasitic Disease Drug Service, National Communicable Disease Center, Atlanta, Georgia. (Area Code 404-633-3311. Nights, holidays and weekends: 633-2176.)



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association



Let's be specific about Campbell's Soups... and reducing diets



There are more than 30 million people in America who are overweight. During the next year, you probably will see more than 1,000 of them in your own practice.

One good way to help these patients is to give them a reducing diet based on ordinary eating patterns.

Campbell has prepared a sensible plan for weight control based on ordinary eating patterns. The plan consists of a patient instruction booklet and a set of menus which provide approximately 1,400 calories daily. The menus are balanced to provide the minimum daily requirements of nutrients.

To obtain a supply for your office write to:
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NOW IS THE TIME... TO GIVE HER TIME WITH OVULEN-21®

Each tablet contains ethynodiol diacetate 1 mg., mestronol 0.1 mg.



The new mother needs time . . .
to adjust to motherhood,
to give her new baby all the love
and attention he requires.
She needs time for her husband . . .
and for herself as well . . .
so that she can come to terms
with the increased cares
and responsibilities now facing her.
She needs time to decide
when she will have additional children
and how many she will have.

OVULEN-21®

Each tablet contains ethynodiol diacetate 1 mg., mestranol 0.1 mg.

GIVES HER TIME

Your prescription for Ovulen-21 gives the new mother time to meet her family's present needs...to plan for her family's future.

She can take Ovulen-21 confidently and comfortably month after month. Its dependability is enhanced by its simplicity of use. A woman needs little or no time to learn the simple Ovulen-21 regimen: three weeks on—one week off. And the automatic record-keeping of the petite, virtually "potient-proof" Ovulen-21 Compock® helps to maintain her schedule...helps put time on her side.

Immediately post partum is the time

It is the time when motivation is highest—when a new mother needs expert advice for the future, so she can space her children and limit her family.

It is also the most opportune time, since she is conveniently present in the hospital, for her to be given both instructions and a prescription.

Non-nursing mothers may begin Ovulen-21 immediately after delivery, on the day of departure from the hospital or at the first postpartum visit, as desired. It is recommended that nursing mothers begin Ovulen-21 four weeks after delivery.

A small fraction of the hormonal agents in oral contraceptive pills has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Indication—Oral contraception.

Contraindications—Thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia, undiagnosed abnormal genital bleeding.

Warnings—Watch for the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, retinal thrombosis); if present or suspected discontinue the drug immediately.

British studies reported in April 1968^{1,2} estimate there is a seven-to-tenfold increase in mortality and morbidity due to thromboembolic diseases in women taking oral contraceptives. In these controlled retrospective studies, involving 36 reported deaths and 58 hospitalizations due to "idiopathic" thromboembolism, statistical evaluation indicated that the differences observed between users and non-users were highly significant. The conclusions reached in the studies are summarized in the table below:

Comparison of Mortality and Hospitalization Rates Due to Thromboembolic Disease in Users and Non-Users of Oral Contraceptives in Britain.

Category	Mortality Rates		Hospitalization Rates (Morbidity)
	Age 20-34	Age 35-44	Age 20-44
Users of Oral Contraceptives	1.5/100,000	3.9/100,000	47/100,000
Non-Users	0.2/100,000	0.5/100,000	5/100,000

No comparable studies are yet available in the United States. The British data, especially as they indicate the magnitude of the increased risk to the individual patient, cannot be applied directly to women in other countries in which the incidences of spontaneously occurring thromboembolic disease may differ.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or sudden onset of proptosis, diplopia or migraine. Withdraw medication if papilledema or retinal vascular lesions are found.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that pregnancy be ruled out for any patient who has missed two consecutive periods before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the first missed period.

A small fraction of the hormone agents in oral con-

ceptives has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Precautions—Pretreatment physical examination should include special reference to the breasts and pelvic organs, and a Papanicolaou smear.

Endocrine and possibly liver function tests may be affected by Ovulen. Therefore, it is recommended that such tests if abnormal be repeated after the drug has been withdrawn for two months.

Pre-existing uterine fibromyomas may increase in size under the influence of progestogen-estrogen preparations.

Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation.

In breakthrough bleeding, and all irregular vaginal bleeding, consider nonfunctional causes. Adequate diagnostic measures are indicated in undiagnosed vaginal bleeding.

Carefully observe patients with a history of psychic depression and discontinue the drug if severe depression recurs.

Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study.

A decrease in glucose tolerance has occurred in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be observed carefully while receiving Ovulen.

Because of the effects of estrogens on epiphyseal closure Ovulen should be used judiciously in young patients in whom bone growth is not complete.

The age of the patient constitutes no absolute limiting factor, although Ovulen therapy may mask the onset of the climacteric.

The pathologist should be informed of Ovulen therapy when relevant specimens are submitted.

Adverse Reactions—A statistically significant association has been shown between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: cerebrovascular accidents, neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement, secretion), change in weight, changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, allergic rash, rise in blood pressure in susceptible individuals, mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme and nodosum, hemorrhagic eruption, itching. The following laboratory results may be altered by oral contraceptives: hepatic function: increased sulfobromophthalein and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T₃ uptake values; metyrapone test; pregnanediol determination.

References: 1. Inman, W. H. W., and Vessey, M. P.: Brit. Med. J. 2:193-199 (April 27) 1968. 2. Vessey, M. P., and Doll, R.: Brit. Med. J. 2:199-205 (April 27) 1968.

Before prescribing see complete prescribing information.

Where "The Pill" Began

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SEARLE





Benadryl[®]

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WHERE DO WE GO? HOW DO WE GET THERE?

(Continued from Page 392)

As an impartial observer of the community system for providing health services to children and fostering their constructive development, I would find the following pertinent:

At many of our outpatient psychiatric clinics a review of the caseload at any one time would reflect a host of variables: children who are being offered a program at the clinic in lieu of other required services not available in the community; children who have been seen at a variety of non-psychiatric facilities in the community over a number of years, but are now judged to require specific medical intervention; more children proportionately under treatment for conditions diagnosed as personality disorders, psychoneurosis, and situational reactions than for chronic brain syndrome, mental retardation, psychosis, and psychosomatic disorders; more white children proportionately than non-white under treatment; minimum or no correlation between diagnosis on the one hand and treatment, treatment modalities, or the rate of improvement on the other hand; minimum or no criteria as to the basis for decisions on the modalities of treatment utilized, or the specific profession or professions to be held responsible.

NEED FOR COMMUNITY PLANNING

In many of our services one would find a great deal of duplication of effort and a spinning of wheels. A minimum of attention is paid to evolving a systematic approach to data collection, analysis, billing, case assignment, and case flow.

In a community which has evolved to the point of offering protective, social and welfare, health, and educational services for children, as an impartial observer I would find for the following: a competitiveness between the various agencies, with each zealously guarding its admissions policy and autonomy; community funds insufficient for adequate growth of each agency, thus further fostering competitiveness; lack of agreement between various agencies; a pattern in which some children with behavioral symptoms who should be treated are contained, while others who should be contained are treated; a community pattern where the environmental fabric normally available for support of constructive child growth and development has been torn down, thus precipitating psychiatric emergencies; an informal transfer and referral system which consistently directs the disruptive child toward long-term care in an institutional setting; rivalry between the various mental health professions in the various child caretaking agencies; and a continuing dichotomy between mind and body, between care and medical diagnosis and treatment.

A visit by an impartial observer to the prenatal clinics, well baby clinics, pediatric hospitals, and physician's offices would reveal the high price paid by children for the sporadic, episodic, fragmented nature of the health services provided. The observer would often find: behavioral symptoms in children, which should signal future developmental deviation, leading the hospital in fact to pursue costly laboratory procedures in search of a disease, a defect of an organ, or diagnosis; anticipatory guidance unrelated to parental concerns; mothers who want to voice their concerns to the physician, but instead receive idle reassurance; pregnant women seeking the dignity that should come with that significant milestone in their lives, hoping to express their concerns, and wishing for the comfort of the physician, receiving instead the sterile ministrations of virtually an engineer.

What would an impartial observer find regarding manpower, what is available, what is contemplated, and what is necessary for delivery of services? In light of the various studies that have been done, including that of the National Health Manpower Advisory Commission to the President, frightening facts and figures would emerge which tell only part of the story.

(Continued on next page)

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481D-9

MANPOWER REQUIREMENTS

One would find a serious shortage of physicians, physician specialists, nurses, dentists, and technicians relating to the health professions. Despite the pressures on our medical schools and the increased number of applicants accepted, it is estimated that at the present time we need one hundred thousand more doctors, one hundred-fifty thousand more nurses, and eighty thousand more dentists. It has been stated that all of the Ph.D. clinical psychologists graduated from universities last year would be barely sufficient in number to fill the vacancies advertised by the State of California. Within my own community and in regard to estimates of manpower required to service the thirty-nine thousand disturbed children there, I suggested that, if we were to deliver services to these children such as we currently are providing to those we treat and with the same spectrum of professional and technical staff, we would need the equivalent of 400 full time child psychiatrists, 1,800 full time psychiatric social workers, and 300 full time clinical psychologists.

Of importance relative to manpower needs for the health professions is the Coggeshall Report of the Association of American Medical Colleges. As Doctor Lowell T. Coggeshall stated: "It is increasingly clear that medical advances and changing health expectations are stimulating unparalleled changes in our society. As the conditions of society change, the institutions as well as society should keep pace. This is the relationship of reciprocal influence, since society itself is strongly molded by its institutions. Nowhere is this reciprocal relationship more evident than in the field of health. Knowledge growing out of research has had increasing influence on the practice of the health professions during the past 50 years and continues to be the most powerful force in altering the style of practice. From developments in practice and changes in demands for health services has grown the need to revise the nation's approach to instructions to the health professions."

For those of us who must now assume responsibility for the health and care of children, the mandate given us is quite clear — our concern should be all children, and not simply those in our immediate care: our interests should lead us to all factors which can impede the healthy development of children; our partners in achieving the goal, of necessity, will be professions and technicians yet undreamed of; and yet in achieving this, we cannot accept any short cuts to excellence.

Relative to manpower, if we look at our nation, we will find the emergence of innovative approaches to the development of new manpower for the mental health and retardation field, as well as for

the health field in general. However, we will also find emergence of identity and role confusion and diffusion, issues between the trained and "less trained," and controversy as to the status implied in such words as "subprofessional" and preprofessional. We will find programs aimed at the development of a pediatric associate, nurse practitioner, psychological assistant, associate social worker, associate group worker, mental health aide, indigenous worker, child care worker, child development specialist, mental health counsellor, maternal caretaker, and creative art specialist.

In this survey I have presented but a few of the factors which merit consideration in attempting to arrive at an answer to the question of where we go.

LONG RANGE GOALS

For some of us the summation of these factors leads to an immediate answer, namely, the right of every citizen, including the child, to the best in health care. This goal requires a commitment in principle to the long-range program required, with short-range objectives constantly leading in the same direction. For others these factors do not lead to an immediate answer, but to even further questions: Will such a heavy emphasis on delivery of service dilute and minimize teaching and research? Will the need for coordination and integration lead to a loss of identity and abrogation of autonomy? Some will express concern over the method utilized to reconcile the private and public sectors in the delivery of services. Others will raise the question of the cost of such programs — a cost which ultimately may lead to increased taxes. For yet others, questions will be raised as to how professionals and technicians with less training can be utilized while the quality of service is maintained.

Many voices will be raised for immediate action and solutions to the problems, while others will insist that any new programs, or reorganization of existing ones, include program evaluation. Some consumers of service in our community, who in the past have had little to say about the planning of services provided to them, will raise serious questions as to whether the choice of directions suggested is really their choice.

SUMMARY

For those of us with responsibility for the provision of services, the solutions are not simple, nor easily arrived at. Further, they are solutions which open the door to further dilemmas, paradoxes, conflicts, uncertainties, and controversy, and further work which must be done.

President Truman asserted in a message to Congress on November 9, 1945: "There must be an attack on: the faulty distribution of doctors and

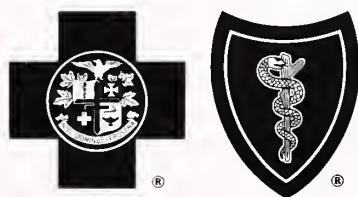
(Continued on Page 412)

When your patients ask what's being done about the rising cost of health care...show them the advertisement on the following page.

Or, better yet, why not remove it and place it in a prominent spot in your waiting room.

We feel we should help doctors gain patient acceptance for the newer methods of delivering health care services.

You'll be seeing this and other advertisements in the public press.



The world's most expensive bed.

Today the average semi-private hospital bed costs about \$65 a day.

But Rhode Island Blue Cross & Blue Shield has a new way to help **shorten** the time you spend in a hospital bed — by a full day or more. It's called Pre-Admission Testing (PAT), and here is how it can work: When you're admitted to a hospital, usually tests are required prior to surgery or before medical treatment can begin. In some cases these tests could be done on an out-patient basis, before you actually enter the hospital.

Your doctor determines if PAT is right in your particular case. If so, you'll spend less time in a hospital bed, more time at your job or at home.

And because the cost of your hospital stay will be less, you'll be helping hold down health care costs and Blue Cross & Blue Shield rates.

So, if you need hospital care, ask your doctor about PAT. It could help you spend less time in the world's most expensive bed.

We feel people shouldn't have to worry about health care bills.



THROUGH .



the Microscope

TRI-STATE RMP RECEIVES FEDERAL GRANT

Award of a first annual grant of \$342,721 to help heart patients in the inner city and rural north receive better care was announced by members of Congress from Massachusetts, New Hampshire, and Rhode Island and the Tri-State Regional Medical Program serving these three states.

The Tri-State program, directed by Dr. Leona Baumgartner, will use \$298,273 of the money to support a program of comprehensive cardiovascular disease care centered at the Boston City Hospital. This is a combined program involving three medical schools and twelve hospitals in the Boston area, and is designed to train more doctors, nurses, and other health professionals from hospitals throughout the region. The program for the first time will integrate medical staffs of Harvard, Tufts, and Boston University, previously working in separate divisions of the Hospital. Physicians will be offered intensive training of one to six months.

The demonstration program will provide both intensive care in the hospital and continuing care in the home. It will include early detection, prevention, treatment, follow-up, rehabilitation, and scientific evaluation of the results. The primary service area is a ghetto where 50 per cent of the residents are black and 70 per cent are unable to pay for medical care.

The Division of Regional Medical Programs in Washington designated \$44,448 of the total fund for a program to be operated by Dartmouth Medical School at the Mary Hitchcock Hospital in Hanover, New Hampshire. This program has been set up at the request of ten hospitals to provide a training course in coronary care for nurses coming from hospitals in New Hampshire and northern Massachusetts. It is expected to train 70-100 nurses a year for work in coronary care units. Future expansion of the program into Massachusetts and Rhode Island is contemplated. The New Hampshire Heart Association and State Department of Health and Welfare are cooperating agencies.

Both the Boston and Hanover programs, it is

expected, will be extended for a second and third year. However, continuation of these projects, as well as development of others, will depend on future appropriations by Congress.

* * *

EXTRA HANDS FOR THE PEDIATRICIAN

An experimental program to train pediatric assistants, with responsibilities broader than those of a nurse but narrower than those of a physician, began this spring at the Bowman Gray School of Medicine, Winston-Salem, N.C.

The pediatric assistant would work under the supervision of a physician, after four years of post high school study — two years of college and two years in the training program.

The program will attempt to prepare the pediatric assistant to man school health clinics and well-baby clinics and to serve in rural public health clinics located within an acceptable distance of the supervising physician. If he is working in the office of a pediatrician or general practitioner, the pediatric assistant may screen patients and take medical histories.

The first year of the program will be devoted to demonstration and lecture work, while the second year would be preceptorship, spent in the offices of selected pediatricians or on the wards of the hospital. Initially the program will be experimental and only three or four students will be admitted to the first class. After the program and its first trainees have been analyzed carefully, enrollment will be expanded.

Work presently is underway to establish a means of certification for graduates of the program.

"Bowman Gray to Train Pediatric Assistant," in Medical Tribune, December 9, 1968)

* * *

NEW RULE ON MEDICARE HOSPITAL AND CASH BENEFITS ANNOUNCED

A request for payment of Medicare benefits filed with a hospital by or on behalf of a hospitalized elderly patient will now be considered a written intent to claim both hospital insurance benefits under Medicare and cash social security bene-

(Continued on Page 401)



The Fortunate One.

Her urinary tract infection reveals itself through pain and discomfort.

While the pain and discomfort of a G.U. infection are anything but pleasant, the patient may be luckier than she realizes. That burning sensation (and/or frequency, urgency, dysuria) is a usually reliable sign of a urinary tract infection. And it's her good fortune that her infection won't go undetected...or untreated.

Azo Gantanol® therapy usually provides analgesic action within one-half hour, while control of the infection begins within two hours. Azo, a specific urinary analgesic, soothes inflamed mucosa to give symptomatic relief. At the same time, the antibacterial component, Gantanol (sulfa-

methoxazole), achieves therapeutic levels in the blood and urine, with diffusion into interstitial fluids. Azo Gantanol—a good choice when urinary tract infection reveals itself through symptomatic distress.

Before prescribing, please consult complete product information, a summary of which appears on opposite page.

Azo Gantanol®

(Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.)

Azo for the pain

Gantanol[®]

(sulfamethoxazole)

for the pathogens

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Urinary tract infections with associated pain or discomfort when due to susceptible organisms; prophylactically in urologic surgery, catheterization and instrumentation.

Contraindicated in sulfonamide-sensitive patients, pregnant females at term, premature infants, newborn infants during the first three months of life, glomerular nephritis, severe hepatitis, uremia and pyelonephritis of pregnancy with gastrointestinal disturbances.

Warnings: Use only after critical appraisal in patients with liver damage, renal damage, urinary obstruction or blood dyscrasias. If toxic or hypersensitivity reactions or blood dyscrasias occur, discontinue therapy. In closely intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed.

Precautions: Observe usual sulfonamide therapy precautions including maintenance of an adequate fluid intake. Use with caution in patients with histories of allergies and/or asthma. Patients with impaired renal function should be followed closely since renal impairment may cause excessive drug accumulation. Occasional failures may occur due to resistant microorganisms. Not effective in virus and rickettsial infections.

Adverse Reactions: Headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, Stevens-Johnson syndrome, injection of the conjunctiva and sclera, petechiae, purpura, hematuria or crystaluria may occur, in which case the dosage should be decreased or the drug withdrawn.

Dosage: Adults—4 tablets initially, then 2 tablets morning and evening.

How Supplied: Tablets, bottles of 50.



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Nutley, New Jersey 07110

THROUGH THE MICROSCOPE

(Continued from Page 399)

fits, Robert M. Ball, Commissioner of Social Security, announced recently. This change became effective upon publication of a new regulation in the *Federal Register* of May 2.

Ball said that under the new procedure the request for payment of benefits filed with the hospital will serve to protect the person's social security and Medicare benefits during the period between the admission to the hospital and the taking of a formal application for benefits. He said that in the event that a patient died before he had an opportunity to file the claim, the application could be obtained from a member of the patient's family, a representative of his estate, or even the hospital itself.

Ball cautioned older people not to wait until they were in a medical emergency before thinking about Medicare. "The ideal time to sign up for both hospital insurance and doctor bill insurance under Medicare is still sometime in the 3 months before the month in which the person will be 65. The new regulation merely saves loss of hospital insurance benefits in those cases where, for some reason, possible ignorance of the law, the person has failed to sign up for the benefits until he had a pressing need for them," he said.

* * *

HILL-BURTON PROGRAM — 1968 FISCAL YEAR REVIEW

The *Hill-Burton Project Register*, U.S. Public Health Service, contains the following summary of the 1968 fiscal year:

"Initial approval for Federal aid under the Hill-Burton program was given to 505 hospitals and related health facility projects during the 1968 fiscal year. These projects will provide 24,283 inpatient care beds and 121 other health facilities at an estimated total cost of \$728.9 million, of which the Federal share is approximately \$208.9 million.

"Of the 505 projects approved 48 per cent relate to general hospitals, which will provide 15,708 beds; 29 per cent are for mental, tuberculosis and long-term care facilities providing 8,575 beds; and the remaining 23 per cent are for public health centers and other ambulatory care facilities.

"In terms of type of construction, the approved projects include 55 new facilities representing 10 per cent of the total Federal share expended; 115 complete replacements, or 30 per cent; and 335 projects involving additions, remodeling, and/or partial replacement of existing facilities totaling 60 per cent of the total Federal share spent during 1968 fiscal year."

* * *

(Continued on next page)

DENTAL PREPAYMENT PLANS INCREASING

A national insurance expert has predicted tremendous growth of dental prepayment within the next decade. Mr. Christie D. Harding of New York City, associate director of the Health Insurance Council, has said that: "The entire field of third part reimbursement of dental care is on the upward swing." He pointed out that the recent contract for comprehensive dental care for employees signed by McDonnell-Douglas Corporation and California Dental Service, and the expected entry of the United Auto Workers into the field of dental care by 1970, will greatly boost prepaid dental programs in the nation. Approximately three million persons are covered by private insurance agencies, and another two and one-half million persons are covered by dental service corporations. By 1975, it is expected that some 50 million people will be covered by some form of dental prepayment.

Two more dental service plans have recently become active bringing the total number to 27. Missouri Dental Service signed its first contract with the Midvale Dental Supply Company of Clayton and the Virginia Dental Service Plan was chosen to administer a local Project Head Start program.

* * *

LOCAL CREDIT BUREAU DIRECTOR NAMED NATIONAL OFFICER

Lewis Tanner, Director of the Medical Clearing Bureau, Providence, Rhode Island, has been elected to the Board of Directors of the American Collectors Association to represent the member collection bureaus of New England. ACA is a trade association of over 2,600 collection bureaus throughout the nation.

Mr. Tanner is a Past President of the New England Collectors Association and recently served as National President of the Medical-Dental-Hospital Bureaus of America.

He is a certified instructor in a great number of courses pertaining to collections, sales and management offered by the American Collectors Association, having attended the Teacher Training Institute at the Michigan State University.

* * *

HOSPITAL RATES TRIPLE IN NATION

Hospital service charges have been growing faster than those of any other type of medical care.

The annual rate of increase for hospital room rates has been more than three times that of the overall Consumer Price Index.

Government studies conclude that rates for hospital rooms will continue to rise.

The Health Insurance Institute listed the following reasons among those contributing most to the hospital care cost rise:

- The high cost of modern medical life saving machinery and techniques.

- Development of new job classifications. Many hospitals now use $2\frac{1}{2}$ hospital employees per patient compared with $1\frac{1}{2}$ several years ago.

- The wage level rise of hospital personnel from the elevator operator to the head surgeon. Also contributing here are trends toward unionization and demands for fringe benefits.

- A general population that is more educated and more demanding with regard to its over-all health care needs.

* * *

NEW PROGRAM ESTABLISHED FOR REHABILITATION OF NARCOTICS ADDICTS

The development and extension of community-based facilities to treat and rehabilitate narcotic addicts was given major impetus recently with the announcement of the availability of funds under a new program recently authorized by Congress.

Staffing grants are now available to non-profit agencies for the operation of addict treatment and rehabilitation facilities.

The National Institute of Mental Health, which will administer the grant program, has issued preliminary guidelines to assist eligible community agencies in developing plans for treatment programs. Final regulations will be promulgated by the Department of Health, Education, and Welfare.

Grants are available to community agencies for an initial period for salaries of personnel to staff the new rehabilitation facilities. Funding covers up to 75 per cent of the professional and staffing costs to operate a new facility or a new program housed in existing facilities, for the first 15 months. Thereafter, maximum Federal support is 60 per cent for the second year, 45 per cent for the third, and 30 per cent for the fourth.

The program was authorized by Congress under the Amendments to the Community Mental Health Centers Act which provide \$4,000,000 during fiscal year 1969 for the construction and staffing of specialized facilities for addicts, and for developing training programs for such treatment. Although current funds have been earmarked only for staffing grants, funds for the construction of new facilities will also be available after July 1.

The program will be administered by the Center for Studies of Narcotic and Drug Abuse in the Division of Narcotic Addiction and Drug Abuse of the National Institute of Mental Health. Applications for funds can be made by public or other non-profit organizations through the Associate Regional Health Directors for Mental Health in the Regional Offices of the Department of Health, Education, and Welfare.

(Continued on Page 403)

n the complex picture
of moderate to severe anxiety...



here is a **new** reason
for prescribing **Mellaril**
(Thioridazine HCl)

**Effectiveness in
mixed anxiety-depression**

Long recognized for its usefulness in the
treatment of moderate to severe anxiety,
Mellaril is now also known to be effective
against mixed anxiety-depression.

Often the symptoms of anxiety states are
difficult to sort out—even with the most careful
probing. The patient may manifest symptoms of
irritation, restlessness, insomnia, somatic
complaints. But what of the depression that may
be mixed in the total picture? It is reassuring
to know that Mellaril may be prescribed—with
strong possibilities of success—when there is
anxiety alone or a mixture of anxiety
and depression.

Before prescribing or administering, see Sandoz literature for full product information, including adverse reactions reported with phenothiazines. The following is a brief precautionary statement.

Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree.

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine hydrochloride). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.

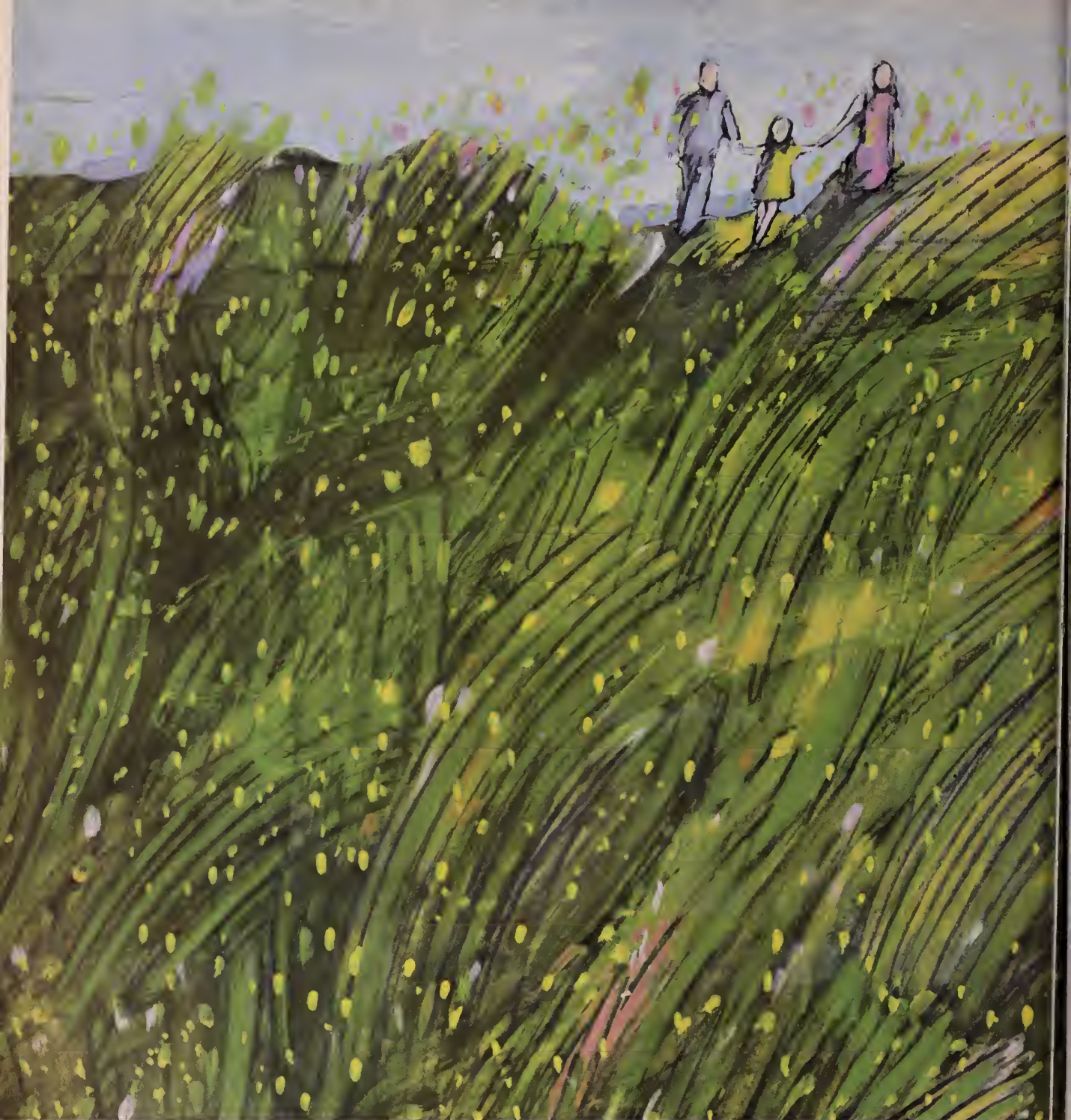
Mellaril[®]
(Thioridazine HCl)
25 mg. t.i.d.

**for moderate to severe anxiety
and mixed anxiety-depression**



SANDOZ SANDOZ PHARMACEUTICALS, HANOVER, N. J.

68-169



...now fast relief of hay fever symptoms with

NTz[®]

Nasal Spray



When pollens fly, just one or two squirts of NTz in each nostril, followed in a few minutes by a second spraying, shrink swollen nasal passages almost on contact. And breathing comfort follows. The antihistamine component of NTz helps combat the allergic reaction and lessen rhinorrhea, sneezing and itching; its antiseptic wetting agent promotes rapid spread of components.

NTz Nasal Spray affords the well-known benefits of Neo-Synephrine[®] in a carefully balanced formula which includes:

Neo-Synephrine[®] (brand of phenylephrine) Cl, 0.5% (adult strength), decongestant
 Thenfadi[®] (brand of thenyldiamine) HCl, 0.5% antihistamine
 Zephiran[®] (brand of benzalkonium as chloride refined) Cl, 1:5000, antiseptic wetting agent
 Treatments with NTz should be repeated every two or four hours as needed. NTz is for temporary relief of nasal symptoms and overdosage should be avoided. Available in squeeze bottles of 20 ml. and 1 oz. bottles with dropper.

Winthrop Laboratories, New York, N.Y. 10016

When it's more than a bad cold



your patient can feel better
while she's getting better

Achrocidin[®]

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN[®] Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen citrate 25 mg.

In tetracycline-sensitive bacterial infection complicating respiratory allergy, ACHROCIDIN brings the treatment together in a single prescription—prompt relief of headache and congestion together with effective control of the organisms frequently responsible for complications leading to prolonged disability in the susceptible patient.

For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN (Tetracycline) equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilanine Maleate 15 mg.

Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and

may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity* reactions—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.



527-B

now she can cope...

thanks to

Butisol SODIUM® (SODIUM BUTABARBITAL)

the "daytime sedative" for everyday situational stress

When stress is situational—environmental pressure, worry over illness—the treatment often calls for an anxiety-allaying agent which has a prompt and predictable calming action and is remarkably well tolerated. BUTISOL SODIUM (sodium butabarbital) meets this therapeutic need.

After 30 years of clinical use . . . still a first choice among many physicians for dependability, safety and economy in mild to moderate anxiety.

Contraindications: Porphyria or sensitivity to barbiturates.

Precautions: Exercise caution in moderate to severe hepatic disease. Elderly or debilitated patients may react with marked excitement or depression.

Adverse Reactions: Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and systemic disturbances are seldom seen.

Warning: May be habit forming.

Usual Adult Dosage: As a daytime sedative, 15 mg. ($\frac{1}{4}$ gr.) to 30 mg. ($\frac{1}{2}$ gr.) t.i.d. or q.i.d.

Available for daytime sedation: Tablets, 15 mg. ($\frac{1}{4}$ gr.), 30 mg. ($\frac{1}{2}$ gr.); Elixir, 30 mg. per 5 cc. (alcohol 7%).

BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg. ($\frac{1}{4}$ gr.), 30 mg. ($\frac{1}{2}$ gr.).

McNEIL

McNeil Laboratories, Inc., Fort Washington, Pa.



THROUGH THE MICROSCOPE

(Continued from Page 402)

Summary of NIMH preliminary guidelines:

To be eligible for a grant, an applicant must be a community mental health center, or be affiliated with such a center, or — if one does not now exist in the area — be prepared to affiliate with a community mental health center if and when one is established.

An organization's program must include the following five essential services: inpatient services (including diagnostic and acute withdrawal), outpatient services (including diagnostic), intermediate care services such as partial hospitalization or halfway houses, 24-hour emergency services, and consultation and education services available to community agencies and professional or other concerned groups.

Grants may be made to eligible applicants to cover part or all of the cost of developing specialized training programs or training materials for providing public health services to prevent and treat narcotic addiction; or inservice training, or refresher courses related to such services. Grants will also be available for the training of personnel to operate narcotic addiction treatment services, and for conducting surveys and field trials to evaluate the adequacy of addiction programs within the different States.

All programs for which funds are requested are expected to use effectively those community resources needed for an adequate program of prevention and treatment of narcotic addiction. These resources include psychiatric services, public health services, general hospitals, social and welfare agencies, rehabilitation services, educational services and halfway houses. Contracts or agreements shall include arrangements made for referral of patients, sharing of clinical information, coordination of agency programs, and cooperation between the staff of the different agencies and organizations. A key feature of any newly funded program — characteristic of the community mental health center program, and now considered vital in the treatment and rehabilitation of narcotic addicts — will be continuity of care, which assures that a patient moves through treatment and into different facilities according to his needs and rate of progress

* * *

TEEN-AGERS OF NATION SMOKING LESS

The nation's teen-agers are not smoking the way they use to, the Health Insurance Institute said recently.

Their smoking, reports the U.S. Public Health Service, "is definitely down — maybe by as much as 10 per cent, or even more."

Dramatic Change

An Institute analysis of government and private studies shows a dramatic change has taken place over the past few years.

A government report in 1967 indicated that for every million adults who stopped smoking, a million teen-agers began.

The National Congress of Parents and Teachers said that several years ago one high school student out of every three smoked.

Another survey of 16,000 pre-high school students in Atlantic City, N.J., indicated that more than 1 in 5 smoked cigarettes.

Earlier Public Health studies of several years back suggested that half of the nation's teenagers were steady smokers at the time. In 1957 at single age of 17, 34.7 per cent of the boys smoked and 25.5 per cent of the girls.

Today the picture, according to current government data, looks like this:

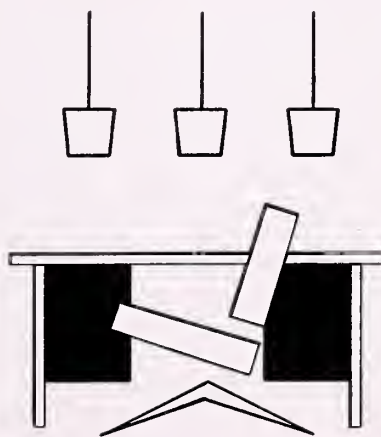
- At 17, 29 per cent of the boys smoke as compared to only about 15 per cent of the girls.
- At the age of 12, only 1.3 per cent of the boys smoke; 0.3 per cent of the girls.

Even so, in 1967, teen-agers were spending an estimated \$10 million a week on cigarettes.

Still, indications are that within the next five years a lot more youngsters who understand smoking hazards will give it up.

Attractive & Functional Offices

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Designers & Suppliers of Offices

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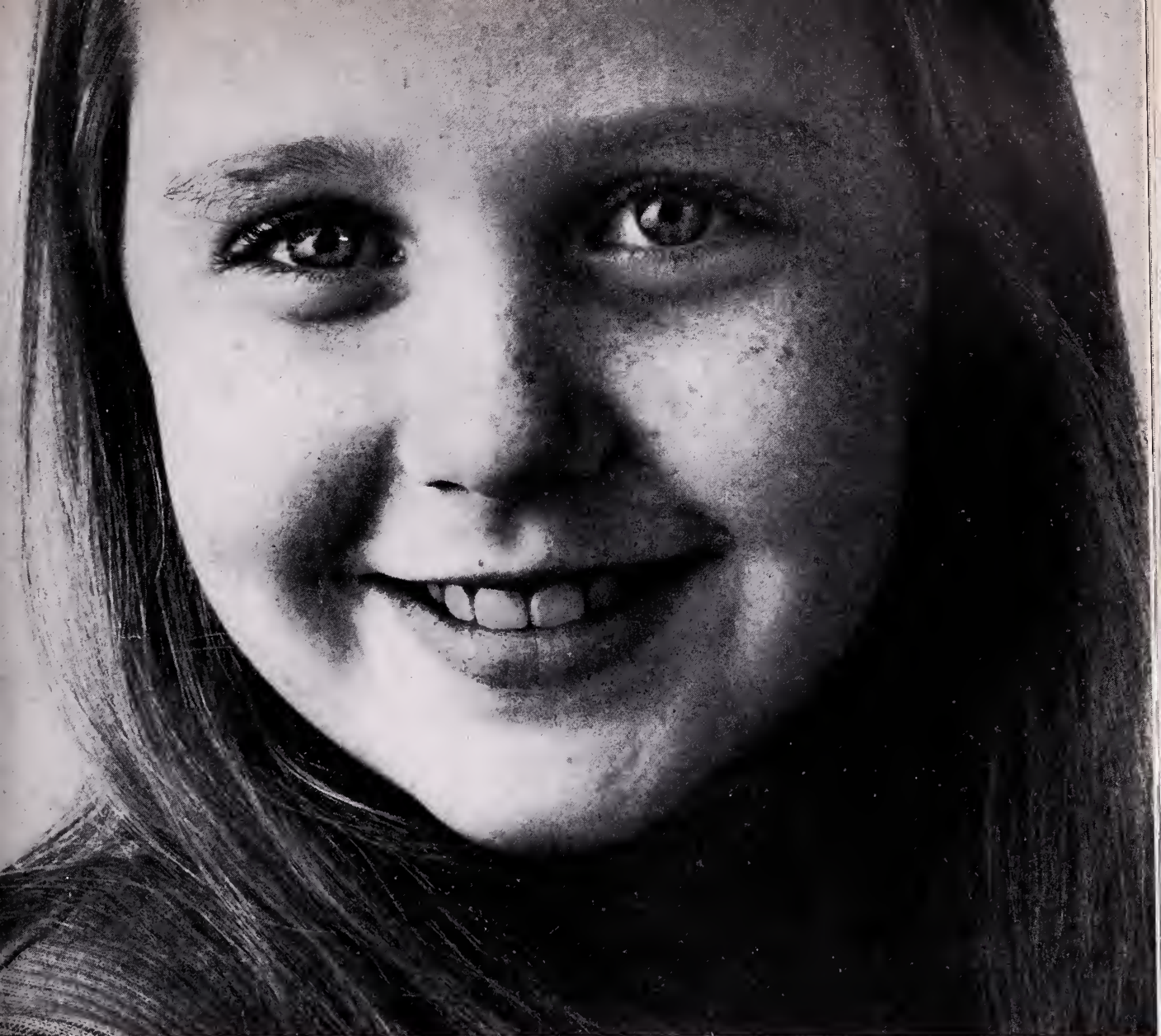


Photo professionally posed.

No injection after all! This penicillin produces high, fast levels—orally.

Pen·Vee® K is usually so rapidly and completely absorbed that therapeutic penicillin levels are attained within 15 to 30 minutes. Thus it can often obviate the need for penicillin injections. The higher serum levels produced generally last longer than with those of oral penicillin G.

Indications: Infections susceptible to oral penicillin G; prophylaxis and treatment of streptococcal infections; treatment of pneumococcal, gonococcal, and susceptible staphylococcal infections; prophylaxis of rheumatic fever in patients with a previous history of the disease.

Contraindications: Infections caused by nonsusceptible organisms; history of penicillin sensitivity.

Warnings: Acute anaphylaxis (may prove fatal unless promptly controlled) is rare but more frequent in patients with previous penicillin sensitivity, bronchial asthma or other allergies. Resuscitative (epinephrine, aminophylline, pressor amines) and supportive (antihistamines, methylprednisolone sodium succinate) drugs should be readily available. Other rare hypersensitivity reactions include nephropathy, hemolytic anemia, leucopenia and thrombocytopenia.

In suspected hypersensitivity, evaluation of renal and hematopoietic systems is recommended.

Precautions: In suspected staphylococcal infections, perform proper laboratory studies including sensitivity tests. If overgrowth of nonsusceptible organisms occurs (constant observation is essential), discontinue penicillin and take appropriate measures. Whenever allergic reactions occur, withdraw penicillin unless condition being treated is considered life threatening and amenable only to penicillin. Penicillin may delay or prevent appearance of primary syphilitic lesions. Gonorrhea patients suspected of concurrent syphilis should be tested serologically for at least 3 months. When lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. Treat beta-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent rheumatic fever or glomerulonephritis. In staphylococcal infections, perform surgery as indicated.

Adverse Reactions: (Penicillin has significant index of sensitization): Skin rashes, ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; serum sickness-like reactions, including chills, fever, edema, arthralgia and prostration. Severe and often fatal anaphylaxis has been reported (see "Warnings").

Composition: Tablets—125 mg. (200,000 units), 250 mg. (400,000 units), 500 mg. (800,000 units); Liquid—125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc.

Wyeth Laboratories Philadelphia, Pa.

ORAL **PEN·VEE® K**
(potassium phenoxymethyl penicillin)



Book Reviews

Todd-Sanford CLINICAL DIAGNOSIS BY LABORATORY METHODS. Edited by Israel Davidsohn and John Bernard Henry. Fourteenth Edition. W. B. Saunders Company, Philadelphia, 1969. \$24.00

This book is the 14th edition of a well established textbook of clinical pathology. Containing 1272 pages of text, it covers multiple aspects of clinical pathology. It has been reviewed by specialists in biochemistry, microbiology and hematology and their comments follow:

Biochemistry

The new edition (14th) represents an updating of the developments in clinical chemistry relative to the last (13th) edition. The new edition is enlarged and contains an additional 300 pages. New sections in (a) Tests of Renal Function, (b) Endocrine Measurement, (c) Principles of Planning for a Medical Diagnostic Laboratory, (d) Cytogenetics, and (e) Examination of Amniotic Fluid have appeared. Relative to clinical chemistry the text is entirely up-to-date. In particular, the section on clinical toxicology was much needed, since this area was neglected in the last edition, as well as in other current texts in clinical chemistry. The section on endocrinology contains the structures of the adrenal cortical hormones, and it is of advantage not to have to refer to a specialized text in order to interpret a clinical determination. The section on water, electrolytes, acid-base, and oxygen is totally new and much improved over the previous edition.

HORACE F. MARTIN, PH.D.

Microbiology

This is a review of Sections on Medical Microbiology. This edition has much better organized sections on the various phases of microbiology than the previous edition. Medical Microbiology and Medical Parasitology are treated in separate chapters much more adequately in each case. All of the material on Diagnostic Microbiology, including techniques, processing of clinical specimens and identification methods for the bacterial pathogens are unified in one chapter instead of being scattered in various chapters and mixed up with Parasitology, as in the previous edition. There is an addition of some 20 pages to the material on Medical Microbiology and a number of very good new illustrative figures. However, as is true of any textbook covering several disciplines, one practicing Diagnostic Microbiology would need to resort to a more adequate textbook in this field for detailed information about certain organisms and

certain bacterial pathogens that are not included in the text.

The chapter on Medical Mycology appears to be reproduced from the previous edition with few changes. A number of excellent photographic illustrations make the material useful for mycologic work; however, there is no information on mycology techniques and a textbook in Medical Mycology would have to be used for this purpose and also for more detailed information on certain of the mycotic agents of disease.

The chapter on viral and rickettsial diseases has been rewritten and appropriately updated for this rapidly changing field. There are numerous illustrative figures not present in the previous edition, and also there is a very useful outline in table form covering some 10 pages on routine procedures for viral isolation studies.

RAYMOND M. YOUNG, PH.D

Hematology

The authors have performed the Herculean task of summarizing the laboratory aspects of hematology, immunohematology, and coagulation into three sections, which, although of necessity concise and factual, contain the relevant basic knowledge of these important branches of laboratory medicine. Practicing internists, residents, and students will find these sections useful in the interpretation and clinical application of hematologic laboratory data. Principles and methodology of routinely used tests are well presented. The section on coagulation and hemostasis gives a lucid account of the platelet, vascular, and plasma coagulation factors, as well as of the commonly used procedures, without confusing the reader by presentation of controversial aspects of speculative theories of coagulation problems.

SYDNEY A. SOLWAY, M.D.

Other subjects of clinical pathology are well covered and the book will serve as a useful reference for pathologists, as well as other physicians.

HERBERT FANGER, M.D.

*Director-Pathologist,
Department of Pathology
Rhode Island Hospital*

COLLATERAL CIRCULATION IN CLINICAL SURGERY. Edited by D. E. Strandness, Jr., M.D. W. B. Saunders Company, Philadelphia, London, Toronto, 1969. \$18.50

Nine authors have succeeded in putting together, in nine sections and thirty-one chapters, the essen-

(Continued on Page 407)



The burdened heart...

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

The burdened heart, psychic tension, and adjunctive therapy with **Valium® (diazepam):**



Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



Artist's conception schematically showing varying ischemic ventricular muscle tissue.

To help lift psychic tension from the already burdened heart

When the cardiac patient shows signs of panic-like reactions following initial diagnosis — a daily regimen of 10-mg Valium (diazepam) tablets *t.i.d.* or *q.i.d.* can help control severe psychic tension, anxiety, apprehension and agitation. For less severe emotional stress, the 5-mg tablet usually provides the desired calming effect.

When the cardiac patient's outlook impedes convalescence — Valium, as it relieves psychic tension, can help the patient regain a realistic perspective... help him deal more rationally with convalescence by countering excessively anxious attitudes towards the future.

When the cardiac patient can't adjust emotionally to post-recovery limitations — Valium, through its prompt and pronounced calming action on psychic tension, may help avoid exacerbation or aggravation of cardiac symptoms.

On proper maintenance dosage, Valium seldom dulls the senses or interferes with functioning.

Should anxiety-induced insomnia be a problem — an *h.s.* dose added to the *t.i.d.* schedule usually helps permit a night of restful sleep.

Valium[®] (diazepam)

2-mg, 5-mg and 10-mg tablets
t.i.d. and *h.s.*

JUDGE ANTIBIOTIC OINTMENTS HERE



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No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B — bacitracin — neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅓ oz. with ophthalmic tip.

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'NEOSPORIN'[®]

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POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT



BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

BOOK REVIEWS

(Continued from Page 406)

tial anatomic and physiological features of the collateral arterial circulation and their relationships to clinical surgical practice. The book as a whole is written in uniform readable style. Each chapter is not a complete review of the subject, but rather a reasonable appraisal of up-to-date pertinent knowledge. An adequate bibliography follows each chapter. The book contains 9 sections, made up of 31 chapters.

By the Editor's own statement, "The purpose of this book is to consider in detail those diseases in which a consideration of collateral circulation is important." This objective is fulfilled exceedingly well. The first of the nine sections describes in one chapter the physiology of "normal" and "collateral" circulation, and provides a background for the sections to follow. In it are described the hemodynamic implications of the components of the arterial wall at different levels of arterial size. The effects of a pathologic process such as atherosclerosis are discussed. The rheologic implications of laminar, disturbed, and turbulent flow patterns in main and collateral vessels are very effectively presented. The text briefly considers the qualitative and quantitative differences in the behavior of different regions of the circulation. Editorially, the purist may be annoyed by the prevalence of the split infinitive in some of the chapters. While this grammatical transgression no longer may be the catastrophic error it once was, excessive splitting does become unpleasant even to the avant gardist.

The surgical physiology of circulatory diseases of the extremities and the principles which guide the treatment of peripheral arterial disease are thoroughly discussed. The applied anatomy of the arterial circulation of the upper and lower extremities is very well described and illustrated by means of excellent diagrams and well-chosen angiograms. Newer methods for studying and assessing the circulation are described, in particular the use of the mercury strain gauge and the ultra-sound flow-velocity meter based on the Doppler effect. The authors emphasize the usefulness of indirect systolic pressure gradient measurements at different levels of the limb. For this purpose the disappearance and appearance of the digital pulse are used as indices of systolic pressure. The technique can be used for indicating the site and extent of obliterative lesions and the effectiveness of collaterals which develop around them.

Seven chapters in two sections describe clinically pertinent features of the cerebral circulation. Applicable anatomic and physiologic data are used to guide therapy and to explain the results of therapy. The vascular surgeon and the internist and

neurologist interested in cerebrovascular disease will find these chapters specially valuable.

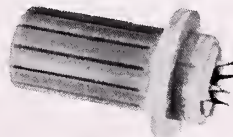
Descriptions of collateral circulation of the brain, heart, and extremities are expected by the reader in a book such as this. He is pleasantly rewarded and surprised to find collated in this book the significant features of the collateral circulation of the viscera as well. The surgeon will be interested in the clinical interpretation of the collateral circulation of the small and large intestines. The importance of prompt diagnosis and prompt decision for therapy is emphasized; the relative merits of diagnostic procedures and technical details are discussed. Of particular interest for the surgeon is the suggestion that segments of intestine of "marginal viability" after mesenteric vascular insufficiency be retained rather than resected. Progression to gangrene is ruled out by a second operation 24 hours later. The wisdom of this departure from the general principles of intestinal surgery surely would depend on the extent of mandatory resection.

Doctor Strandness's book is not a text-book in the sense that it would present only such material as has "stood the test of time." It is really a monograph which describes matters of current interest

(Continued on next page)

TB is still around.

In 1967 almost 45,000 new active cases were reported. Isn't that a good reason to make tuberculin testing with the white LEDERTINE™ Applicator a routine part of your physical examinations?



TUBERCULIN TINE TEST

(Rosenthal) with Old Tuberculin

Precautions: With a positive reaction, consider further diagnostic procedures. Use with caution in persons with active tuberculosis or known allergy to acacia. Vesiculation, ulceration, or necrosis may occur at the test site in highly sensitive persons.

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A Division of American Cyanamid Company, Pearl River, N. Y.

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and still debatable. While presented by authorities in their respective fields, one can find opinions with which he might not wholly agree. Thus, in the discussion of lumbar sympathectomy, the importance of including L-1 or higher in the resection is emphasized without noting the fact that, as compared with the vigorous control which the sympathetic vasoconstrictor fibers exert on the circulation of hands, feet, and digits, vasoconstrictor activity in the extremities proximal to these areas and in the trunk is not very intense. Extensiveness of sympathectomy could better be related to the objective of providing as much obstacle as possible to regeneration. Nor does the reader find mentioned, if only to disapprove of it, the questionable concept that for optimal effects upon the circulation of the toes, one should limit the denervation to the vascular bed of the toes.

The book is a valuable addition to the surgical literature, and a valuable companion for the surgeon in training, for the surgeon in practice, and for the student who wishes to delve deeply into the anatomic and physiologic basis of vascular surgery.

F. A. SIMEONE, M.D.

HANDBOOK OF PEDIATRIC MEDICAL EMERGENCIES by Charles Varga and Contributors. The C. V. Mosby Company, Saint Louis, 1968. Fourth Edition. \$19.75

This handbook could very easily qualify as a composite of handbooks having to do with pediatric medical emergencies. The concepts and philosophy of pediatric emergencies is excellently contained in the book's introduction by Doctor Varga. Before the book's inner value can be totally appreciated, it is recommended that the Introduction be read first. It serves as a very thorough preamble to a very fine outline form for the treatment of pediatric emergencies.

The eighteen chapters are concise, to the point, and uniform. The choice of contributors to the book reflects very good pediatric authority and integrity. Printing is clear and done in such a style or pattern that eye fatigue is not a problem. One can very quickly identify a particularly important point in the subject matter being reviewed. References on the subject matter in each chapter are available in the latter pages of the book and do not, therefore, clutter up information quickly sought after in the treatment area. A great service is rendered in the Appendix by the presentation of material covering poisons, both commercial and domestic. The same can be said for the Appendix section which contains the names and dosages of drugs used in emergency and semi-emergency situations.

This book is of a type that should be in a Pediatrician's library; but more importantly, it should be available in any hospital accident room and in any pediatric hospital facility. It should be "where the action is" and not isolated and confined to the leisure of a hospital library.

JOHN P. GRADY, M.D.

VARIETY OF MEN by C. P. Snow. Charles Scribner's Sons, New York, 1966, 1967. \$5.95

C. P. Snow has chosen to write brief, biographical and analytical sketches of a variety of important 20th century men. Here, as frequently happens, the biographer tells us as much about himself as he does about his subjects. Snow is a special kind of social historian of his time by virtue of his having written contemporary historical novels of the scientist in contemporary society, in the university, and in government. He has published two classics in didactic form: his *Godkin* and *Rede Lectures* given at Harvard and Cambridge, and published respectively under the titles, *Science and Government*, and *The Two Cultures*.

The selection of men about whom he has chosen to write in this collection of essays is diverse: Rutherford, G. H. Hardy, H. G. Wells, Albert Einstein, Lloyd George, Winston Churchill, Robert Frost, Dag Hammarskjöld, and Stalin. All except the latter were personally known to the author. There was variety in their callings as well as in their backgrounds and private lives. But they all possessed a common trait — genius, and with it a drive for pre-eminence and power; intellectual, moral, or political.

Although *Variety of Men* does not describe the lives of any physicians, nor is the author one, the analysis of men of genius holds, and always has held, the interest of physicians. One immediately recalls Lord Russell Brain's delightful collection of essays titled "Some Reflections on Genius." Although C. P. Snow goes out of his way to say that he is not given to psychologizing, it is impossible not to appreciate his talents in this direction or the unusual gifts or psychological traits of his subjects. The group that C. P. Snow chose had in common superb intellectual gifts. Many manifested the entire gamut of psychological aberrations from minor to major. In reviewing, for example, Snow's documentary evidence on Stalin, one cannot escape the same conclusion as the author's: that Stalin suffered typical paranoia, as manifested in his purges.

His choice of Rutherford for his first analysis was almost inescapable. He described him succinctly as having considered himself the hero in the heroic age of physics. Although he looked like a

farmer, he was, even before being a physicist, a top classical scholar. He was quite clearly an egoist of the first order, addicted to flattery, and working for his wordly successes.

G. H. Hardy began a long personal friendship with Snow because of their mutual interest in cricket. It is in reference to Hardy's character that Snow makes the observation that all mathematical geniuses have that trait clearly manifest by the age of four and are frequently able to handle large numbers before they are able to read. Hardy's eccentricities and individuality were manifested in the minor aberrations of refusing to be photographed, never looking at himself in the mirror, and immediately covering the mirrors in any hotel room which he entered. There are inferences that this well may have been extreme negative narcissism in its purest form.

A drive for personal recognition and an almost puerile striving for awards and greatness are illustrated in the life of H. G. Wells, who died in sadness because he was never elected to the Royal Society. Snow believes this was one of the great injustices of the Establishment. Snow knew Wells intimately and recognizes him as the prophet of twentieth century science. From his inventive mind came the tank of World War I. In his novels of science and fiction Wells had accurately predicted most of the latter twentieth century developments. Wells came from an extremely poor family, literally lifted himself by his bootstraps, and obtained an education at a very difficult time only by winning a scholarship. He was privileged to have been taught by T. H. Huxley; but he regretted all his life that he had not pursued his interest in biology. On the literary side he combined two cultures, which must have pleased Snow. Henry James was a good literary friend of his. Wells manifested a great degree of sexuality all his life, and his private life is exposed. George Bernard Shaw criticized him for this, but, says Snow, Shaw "never had to struggle with a passionate nature." Snow pays the highest respect to Wells' inventiveness, imagination, and supreme literary capabilities. His inventiveness extended to words, to literary construction, and above all, to his private conversation.

The supreme politician is found in the person of Lloyd George. The pragmatism and political accommodation which may be reached between great politicians is illustrated by Winston Churchill's defense of Lloyd George's speculation in Marconi shares before the company was awarded a government contract. Lloyd George repaid his debt by whitewashing the unfortunate Gallipoli Campaign. History has recorded his vagaries and dalliances which led to his being called "the old goat."

Lloyd George in the author's opinion will remain great because of his practical politics and his incisive understanding of the socio-political realities of the early twentieth century. He was a great politician because he had the perspective to realize that, despite all he had done, history would record many of his activities as "changes that would make our local concerns no more significant than the War of the Roses." A man who could show the utmost concern for everyday politics, take it with a grain of salt, and sleep well every night including the years of the First World War, truly has something that sets him apart; he is entitled to the appellation "political genius."

Einstein was "the noblest of them all. Good, gentle, wise." Above all, he was a great moralist. He was "the prophet of reason and peace." Einstein's lack of political realism, often written about is offset by his recognition of the true political intent of Hitler and his warning of the peril. He indicated clearly to President Roosevelt the possibility and practicality of the atomic bomb. As in the case of all of these men of genius, Einstein manifested a personal driving force powered by his ego; "he had an element of the exhibitionist and the ham coexisting with his spiritual grandeur."

Winston Churchill was the paradox of paradoxes. He remarked facetiously that he was obviously unprepared intellectually for Oxford and Cambridge, barely made Sandhurst, and thus was spared the company of "drunken scholars." Snow, who knew him well, states that he was not a compulsive drinker nor could he ever be considered an alcoholic. It is a statement of mere fact that he drank all day, every day, all of his life. Of medical interest is Snow's observation that only Lord Moran in his diaries has achieved any real insight into the man. Churchill, initially a failure in every respect, will go down in history as a great leader of men. He was the epitome of "the virtues, graces, style, courage, magnanimity, loyalty, wit, and gallantry."

Robert Frost was "a bit of a fraud," with a complete dichotomy as between his public and private persona. This *Vermont* farmer was born in *California*; he never was a farmer in any sense of the word. He disregarded the welfare of his wife and family, but his complete dedication to his work borders on that of the constitutional psychopath. He was forty before his work was recognized, and then only in England. A succession of academic posts followed; but he knew nothing about the academician's approach to poetry. Louis Untermeyer was his press agent and friend; but Frost was obsessive and abusive in his letters to

(Continued on Page 412)

But before you prescribe Pertofrane, please see the full prescribing information and especially note Contraindications, Precautions, Warning, Adverse Reactions and Dosage. A brief summary of that information is included here.

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Contraindications: Do not use drugs of the M.A.O.I. class with Pertofrane. Hyperpyretic crises or severe convulsive seizures may occur; potentiation of adverse effects can be serious or even fatal. When substituting this drug in patients receiving an M.A.O.I., allow an interval of at least 7 days. Initial dosage in such patients should be low and increases should be gradual and cautiously prescribed.

Warning: Activation of psychosis may occasionally be observed in schizophrenic patients. Do not use in patients under 12 years old, and do not use in women who are or may become pregnant unless the clinical situation warrants the potential risk.

Precautions: Careful supervision and protective measures for potentially suicidal patients are necessary. Discontinuation of therapy or adjunctive use of a sedative or tranquilizer may be necessary in the presence of increased anxiety or agitation, hypomania or manic excitement. However, phenothiazines may aggravate the condition. Atropine-like effects may be more pronounced (e.g., paralytic ileus) in susceptible patients and in those receiving anticholinergic drugs (including antiparkinsonism agents). Carefully observe patients with increased intraocular pressure. Prescribe cautiously in hyperthyroid patients and in those receiving thyroid medications. Cardiovascular complications (myocardial infarction and arrhythmias) are potential risks since they have occasionally occurred with imipramine, the parent compound. Desipramine may block the pharmacologic activity of guanethidine and related adrenergic neuron-blocking agents. Hypertensive episodes have been observed during surgery in patients on desipramine therapy.

Before prescribing the drug, the physician should be thoroughly familiar with prescribing information, with the literature, with all adverse reactions, with the diagnosis and management of depression, and with the relative merits of all measures for treating the condition.

Adverse Reactions: Dry mouth, constipation, disturbed visual accommodation, anorexia, perspiration, insomnia, drowsiness, dizziness, headache, nausea, epigastric distress, and skin rash (including photosensitization) may appear. Since orthostatic hypotension has occurred, carefully observe patients requiring concomitant vasodilating therapy, particularly during the initial phases. Other adverse reactions include tachycardia, changes in EEG patterns, tremor, falling, mild extrapyramidal activity, neuromuscular incoordination, epileptiform seizures. A confusional state (with such symptoms as hallucinations and disorientation) occurs occasionally and may require reduced dosage or discontinuance of therapy. Rarely, transient eosinophilia, slight elevation in transaminase levels, transient jaundice, or liver damage have occurred. If abnormalities occur in liver function tests, discontinue drug and investigate. Occasional hormonal effects, particularly decreased libido or impotence and instances of gynecomastia, galactorrhea and female breast enlargement have been observed. Urinary frequency or retention may occur. The drug should be discontinued if agranulocytosis, bone marrow depression, jaundice, thrombocytopenia, or purpura occur.

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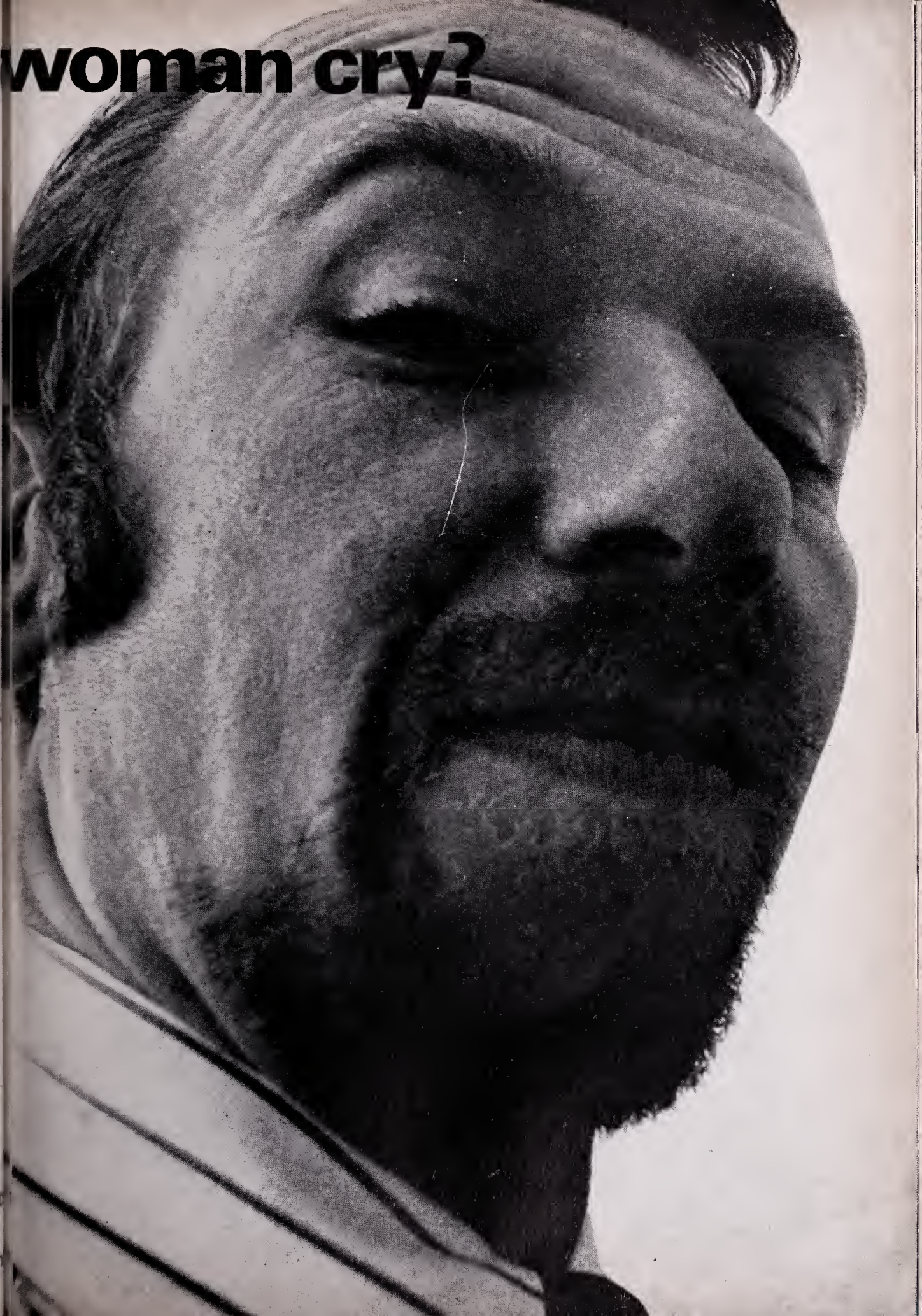
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when words are not enough



woman cry?

BOOK REVIEWS

(Continued from Page 409)

Untermeyer. Frost on his deathbed was cheered only by hearing once again that he had been nominated for the Nobel Prize. He had failed annually to receive the prize, and each year went into a profound depression after the awards were made. Why, then, did Snow select Robert Frost as a subject? Because above all he personified the true artist; he would never write or publish a bad poem. He continually worried that his work was not perfect; to his last day he attempted to achieve perfection. One may call Frost's preoccupation with the Nobel Prize a manifestation of a psychopathic personality, a juvenile trait, or a puerile desire for approbation. But in Snow's opinion, few men have been so true to their art. "In all his complexities," he wrote of Frost, "there was one simplicity, he wanted to write great poems; he was a true artist; as an artist he had complete integrity, that is, nothing would have persuaded him to write a poem that he knew to be bad."

Dag Hammarskjöld, as Snow knew him, personified all of the virtues of a true aristocrat. He was aesthetic, capable as an administrator, probably the author of the modern Swedish Welfare State, and a deeply religious, mystical person. Again Snow suggests an extremely narcissistic trait; Hammarskjöld's preoccupation with death was almost a wish. His premonition before his accidental death will appeal to those who still fancy themselves as being "fey" in the true Swedish sense. The term derives from an old Swedish saga in which a character called Ulf the Unwashed indicates to his shipmates that he has foreknowledge of his own death. He was called "fey." Within minutes Ulf the Unwashed was accidentally killed.

Stalin he saved for last. In all this "variety of men," the extreme manifestations of personality bordering at times on the pathological can be seen, but never so genuinely in a clinical sense as in the case of Stalin. Stalin possessed an enviable knowledge of Russian literature, a quality which Snow admires in any man. Snow states clearly that in his own (Snow's) mind Stalin was paranoid; but, Stalin in spite of his paranoia, wrought the greatest political and economic achievements of his generation.

Just as any biographer tells us as much about himself as about the men of whom he writes, can it not be that C. P. Snow, dedicated to the proposition that all cultures should be one, finds his ideal man a distillate of the best qualities of a number of men — the scientists, Rutherford, Hardy, and Einstein; the historian and prophet of

science, H. G. Wells; the total politician, Lloyd George; the statesman, Dag Hammarskjöld; the indomitable leaders, Stalin and Churchill; and the poet Robert Frost, who added the enrichment of integrity?

The collection of essays is a chronicle of a "variety of men" who indisputably have determined the direction of society as we know it. A worthy addition to the "lives" of Plutarch, and those of Tacitus, Curtius, St. Jerome, Johnson, and Goldsmith.

ROBERT V. LEWIS, M.D.



WHERE DO WE GO? HOW DO WE GET THERE?

(Concluded from Page 398)

other medical personnel which can only be corrected if adequate facilities for the practice of modern medicine are more generally available; the need of public health services and better provisions for maternal and child care; the need of provisions for research and education to increase the powers of medicine and improve the quality of medical care; the cost of medical care which cannot be met by individuals afflicted with illness and disability, by the casual offices of philanthropy or by the gratuitous services of physicians." There is even more reason twenty-four years later to mount this attack, not only for adults, but for children as well.

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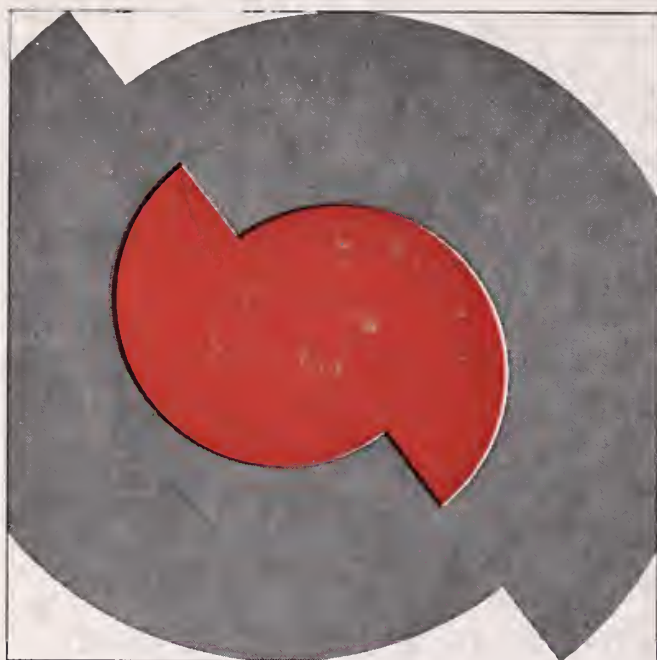
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Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potential drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the low dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis) jaundice and hepatic dysfunction have been reported occasionally, make periodic blood counts and liver function tests advisable during protracted therapy.

BALCONY

AUGUST, 1969

rhode island medical journal



R. I. PHYSICIANS' SMOKING HABITS REVISITED . . . SEE PAGE 437



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Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. **Gastrointestinal effects** such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported.

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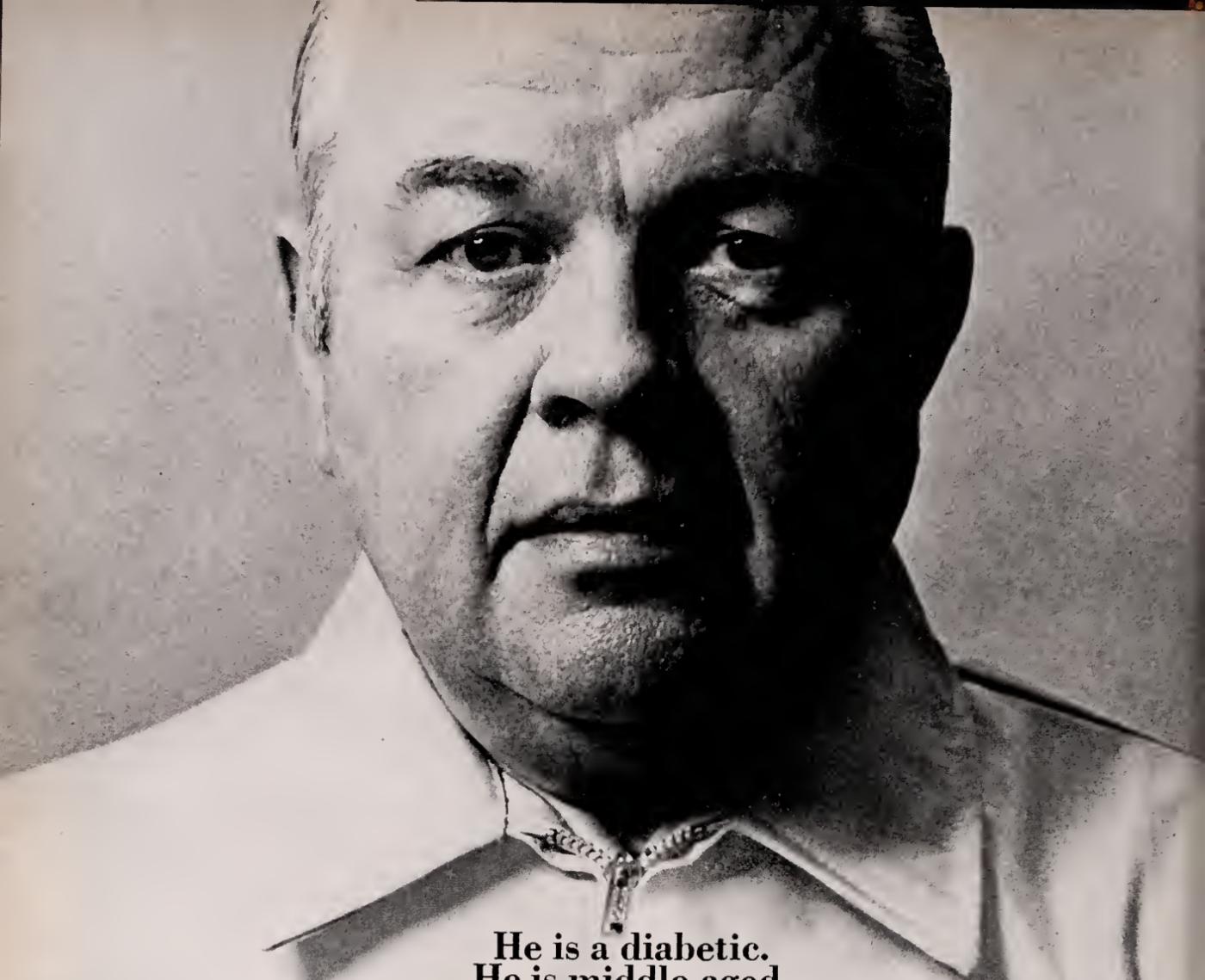
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Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—*anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani.* Skin—*maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of nails (rare).* Kidney—*rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare).* Hypersensitivity reactions—*urticaria, angioneurotic edema, anaphylaxis.* Teeth—*dental staining (yellow-brown) in children of mothers given drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in bone-forming tissue with no serious harmful effects reported thus far in humans.*

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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RHODE ISLAND PHYSICIANS' SMOKING HABITS

REVISITED: 1963-1968

- . . . *Barring Certain Religious Groups No Population Segment Shows Comparable Improvement . . .*
Alex M. Burgess, Jr., M.D., and John J. Tierney . . . 437

UNUSUAL CAUSES OF COLOR CHANGES IN URINE

- . . . *Excessive Metabolites In Infectious Mononucleosis And Paprika Ingestion Are Incriminated . . .*
Nathan Sonkin, M.D. . . . 441

THE DECLINING ROLE OF SURGERY IN PULMONARY TUBERCULOSIS

- . . . *Successful Surgical Treatment Of Medical Failures Possible With Low Morbidity and Morbidity . . .*
Albin N. Grenda, M.D. . . . 442

CLINICAL OBSERVATIONS ON DIVERTICULOSIS-DIVERTICULITIS OF THE APPENDIX

- . . . *Rectal Bleeding in Association With Symptoms of Acute Appendicitis Suggests Diagnosis . . .*
S. K. Tamvakopoulos, M.D. . . . 443

WHAT IS FITNESS?

- . . . *Physical Fitness, Tranquility, and Love of Fellow Man Are Essentials of Happiness . . .*
Donald L. Cooper, M.D. . . . 445

ATTEMPTED SUICIDE IN ADOLESCENTS

- . . . *Suicide Prevention Center in Rhode Island is An Urgent Need . . .*
Laurence A. Senseman, M.D. . . . 449

THE CAPGRAS SYNDROME: A RARE PSYCHIATRIC CONDITION

- . . . *Love-Hate Conflict Resolved by Directing Ambivalent Feelings To An Imagined Double . . .*
Yani Karkalas, M.D., and Mario Nicotra, M.D. . . . 425

REPORT OF ACTIONS OF A MA HOUSE OF DELEGATES

MEDICAL PROFESSIONAL LIABILITY

EDITORIALS

- Asthmatic Deaths . . . 455
There Must Be A Better Way . . . 455
Synthesis of An Enzyme — A Major Breakthrough . . . 456
New Program of Postgraduate Psychiatric Education in Rhode Island . . . 456
Providence Community Health Center . . . 456
Providence Community Health Center . . . 456
Drug Abuse in Rhode Island . . . 457
A Vanishing Art . . . 457
Pheromone, Perfume and Passion . . . 458
Lingual Tonsillitis . . . 458

DEPARTMENTS

- Book Reviews . . . 468
Edalogy . . . 469
In The Editor's Mailbox . . . 429
Peripatetics . . . 433
Through the Microscope . . . 464
The Washington Scene . . . 424

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Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions,

observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

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Report Of Actions Of The House Of Delegates Of The American Medical Association At The 118th Annual Meeting, At New York City, July 13-17, 1969

The picketing of the headquarters hotel of the delegates to the American Medical Association, the intrusion by radicals to disrupt the opening session of the House, and the heat of the week did not deter the delegates from the States in the consideration of fifty-nine reports and 137 resolutions in one of the busiest sessions in years.

During the session the House also heard a speech by the Honorable Spiro Agnew, Vice President of the United States, an informative and informal address by the newly appointed Secretary of Health, Education and Welfare, Dr. Roger O. Egeberg, as well as an outstanding address by retiring president Dr. Dwight L. Wilbur.

The complete report of the actions of the House

AMA HOUSE ACTION

The AMA Board of Trustees recommended the acceptance of Report D.—Medical Professional Liability, and submitted the following proposals contained in the report as recommendations. The House of Delegates approved.

1. First, The American Medical Association recommends that its constituent associations seek the enactment of appropriate state legislation designed to provide a more efficient and equitable determination of malpractice claims and litigation.

2. Second, it is recommended that constituent associations, with the assistance of the AMA, seek the cooperation of hospital associations and third party payers in exploring and developing, if feasible, pilot programs which will provide scheduled benefits for persons injured as a consequence of medical accidents occurring in the delivery of health care, irrespective of fault.

3. Third, that workshops on malpractice insurance problems be conducted, as requested by the Board of Trustees, in which participation will be invited from (1) physicians confronted by insurance problems, (2) representatives of the insurance carriers, (3) staff attorneys of AMA and other appropriate staff personnel, (4) representatives of and attorneys for the hospital service field, (5) nurses, and (6) legislators.

EDMUND T. HACKMAN, M.D.

Delegate from Rhode Island

SEEBERT J. GOLDOWSKY, M.D.

Alternate Delegate from Rhode Island

is published in the Journal of the AMA, and a summary has been published in the American Medical News, but for the information of all our membership who may not have seen the reports in the other publications, we offer the following summary of highlights of the meetings of the House:

AMA Membership for Osteopaths

In response to a House directive at the Clinical Convention, 1968, that qualified osteopaths be admitted to full active membership in the AMA, the House amended the first paragraph of Chapter I, Section 1 of the Bylaws as follows:

(A) Regular Members — Regular membership shall be limited to those members of a state medical association who hold the degree of Doctor of Medicine or Bachelor of Medicine, or who hold an unrestricted license to practice medicine and surgery, and are entitled to exercise the right of membership in their state medical associations, including the right to vote and hold office, as determined by their state medical associations.

Scientific Sections

The Ad Hoc Committee to Study the Modus Operandi of the Scientific Sections reported its belief (which the House adopted) that the AMA can achieve greater unity within the medical profession and further strengthen its scientific program by inviting the national medical specialty societies to play a more active and responsible role and giving those societies a privilege of participating in the selection of section delegates in the AMA House and other section officers.

AMA Bylaws, Chapter VII, Sections 3-9, are to be rewritten to affect these changes, among others:

Each section will establish a section council. After the 1970 Clinical Convention, medical specialty societies will be invited to help form section councils.

Membership of the section councils "shall be selected by the national specialty societies listed in the American Medical Directory apportioned on the basis of the number of AMA members belong-

(Continued on Page 420)


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AMA HOUSE OF DELEGATES

(Continued from Page 418)

ing to each specialty society and one member to be elected by the scientific section from the section membership."

At the 1971 Annual Convention, establishment of AMA section councils will be reported to each specialty section. The councils become effective January 1, 1972.

All section councils will be under the direction of the Board of Trustees and will be governed by rules established by the Board and approved by the House.

Peer Review

This statement was adopted by the House: "The Council on Medical Service knows of no greater challenge facing the profession today than to secure universal acceptance and application of the (peer) review concept as the most meaningful method for creating a public awareness of medicine's efforts to assure high quality of health services at a reasonable cost."

Comprehensive Health Planning

The House said, about comprehensive health planning, that "Certainly, physicians and their professional organizations must accept the responsibility of working in the planning group throughout all

stages of planning in order to provide guidance in choosing goals and programs that will realistically meet the community's needs;" and further resolved that "financial reimbursement for health care be based on the adequacy, competency and efficiency of patient care and not on the basis of approval by any regional planning agency."

Cost of Care

The House stated that "The physician's influence on the costs of health care will be in proportion to his conscious efforts to adhere to practices which conserve the resources of his patient. As the provider of medical service, the doctor has a significant and responsible role in any organized effort to control health care expenditures. In this role, the physician has a challenge to maintain and improve a system that best serves the public and is most acceptable to him and to the profession of which he is a part."

Medicare and Medicaid

In connection with reducing medicaid costs, the House adopted a report listing four action programs of the profession: expanded peer review programs by county medical societies to reduce hospital and nursing home care and to expand ambulatory care; eradication by the profession of isolated abuses by physicians; promotion of innovative health service delivery systems for low income communities, with emphasis on ambulatory care; and programs by local medical societies to preserve quality of care in the face of cost containment measures.

With respect to physician payment in teaching situations, the House resolved that the Board of Trustees "take action to evaluate and effect improvement of the regulations in keeping with the intent of Medicare and Medicaid in relation to teaching situations."

On the subject of medicare fees and fee schedules, the House said, "While the AMA has not taken a specific position on the procedures relating to the development and application of physicians' fees profiles and prevailing charge screens, the actions which have been taken by the House would indicate that these concepts as defined through directives of the Social Security Administration, are not consistent with policies of the American Medical Association."

The House also said that since "Actions taken by DHEW to set rigid limits on levels of payments to physicians who provide services under Medicaid appear in contradiction to Congressional intent that Medicaid patients receive care on the same basis as private patients," it resolved that the AMA "urge a reassessment by Congress of its intent and priorities in relation to Title XIX."

Regarding the isolated abuses of government pro-

(Continued on Page 421)

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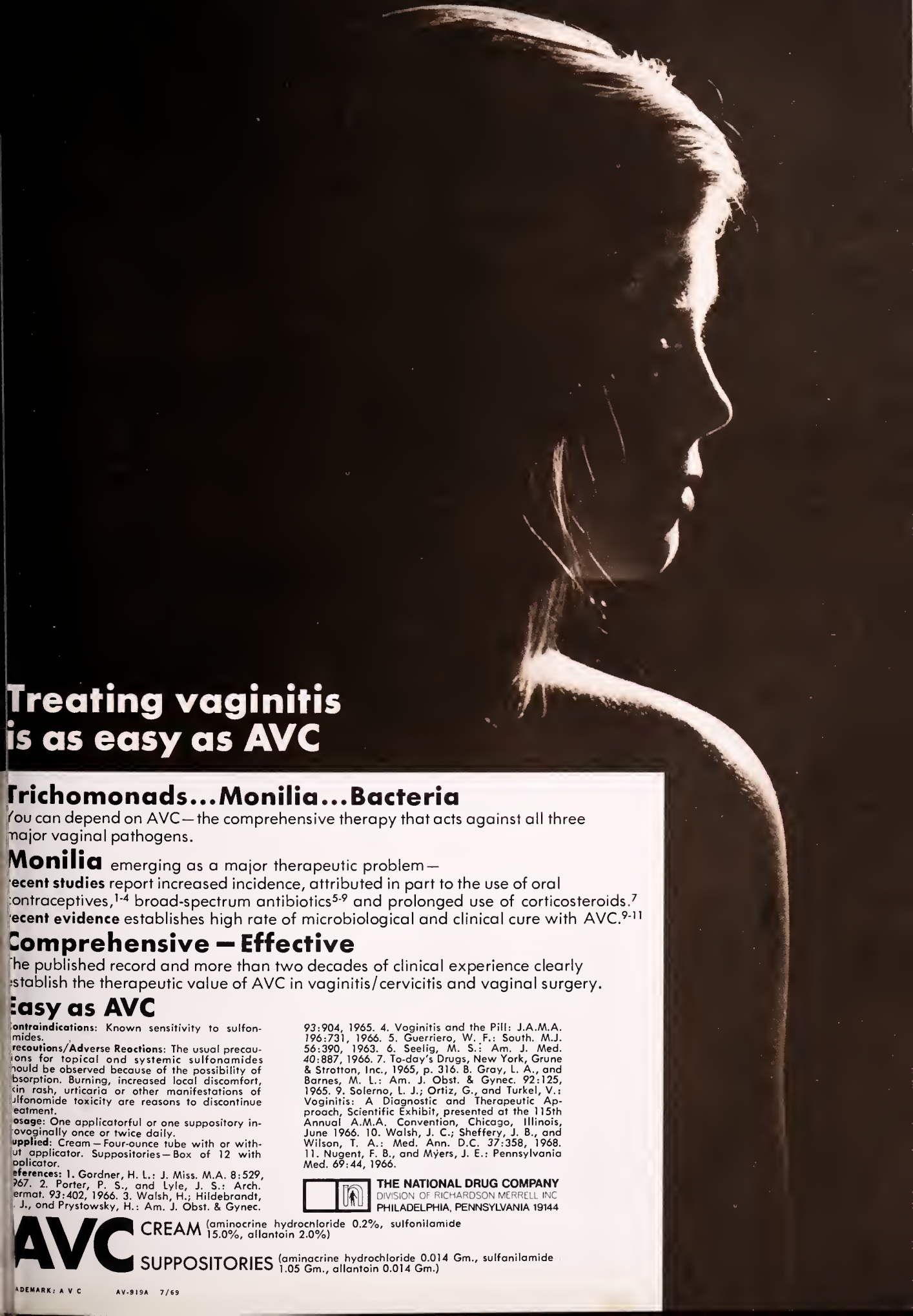
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References: 1. Gordner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., and Lyle, J. S.: Arch. Dermat. 93:402, 1966. 3. Walsh, H.; Hildebrandt, J., and Prystowsky, H.: Am. J. Obst. & Gynec.

93:904, 1965. 4. Vaginitis and the Pill: J.A.M.A. 196:731, 1966. 5. Guerriero, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. To-day's Drugs, New York, Grune & Stratton, Inc., 1965, p. 316. 8. Gray, L. A., and Barnes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Solerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. 10. Walsh, J. C.; Sheffery, J. B., and Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.



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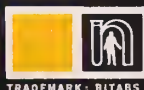
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AMA HOUSE OF DELEGATES

(Continued from Page 420)

grams, the House resolved that the Board's "efforts to obtain access to information referable to alleged misuse of any programs of health care be commended" but added that "In the publicizing of charges without the availability of reasonable and specific facts concerning individuals, the result is detrimental to the best interests of American medicine.

Medical Care as a Right

To make its position clear in the long-standing discussions of medical care as a right, the House resolved that it "reaffirm its position (1) that it is a basic right of every citizen to have available to him adequate health care; (2) that it is a basic right of every citizen to have a free choice of physician and institution in the obtaining of medical care; and (3) that the medical profession, using all means at its disposal, should endeavor to make good medical care available to each person."

Extended Care

Because of the higher cost of hospitalization, the House resolved that the AMA "be urged to seek changes in the medicare law to allow direct admission to extended care facilities when eligible patients' conditions require less than acute hospital care."

Reducing Paper Work

Recognizing the avalanche of paper that threatens to inundate physicians, the House resolved that the AMA and state medical associations "undertake new discussions with governmental agencies, insurance companies and hospitals with the objective of achieving substantial reductions in the amount of paper work — hopefully amounting to at least a one-half decrease — and thus reducing the cost of health care and enabling physicians to devote the maximum time and effort possible to the care of patients."

Private Practice

A resolution that the AMA "establish a Council on Private Practice, with the primary objective being to espouse the aspirations and goals of private practice" was adopted by the House and referred to an ad hoc committee to be appointed by the Speaker of the House.

Health Care of the Poor

The House adopted the report of the Board of the Board of Trustees' Committee on Health Care of the Poor, which reiterated "our strong commitment toward expanding nationwide programs to improve the health of the poor" and stated that "the same quality of medical care should be accessible to all people."

The committee listed "certain concepts that we

believe must be included in the Association's program:" (Paraphrased and condensed.)

1. Providing comprehensive health care to the poor is a desirable goal.
2. It must be a continuing program, identifying both short-range and long-range activities.
3. The committee's purpose must be to implement the research that has been done on unmet needs for health services.
4. Program must provide for participation of the poor in planning projects for their communities.
5. Physicians should work with numerous other organizations, both in and out of the health field, that have expressed concern about improving health care of the poor.

The committee concluded by stating that it "recognizes that the problems for which it hopes to find solutions are too critical and too complex for superficial, cursory answers. It believes that dynamic action in this field must have a top priority in the American Medical Association's activities."

Physicians and Hospitals

Most items considered by this Reference Committee had to do with physicians, hospitals and the JCAH.

For example, the House resolved that "the AMA Commissioner to the JCAH urge the Joint Commission to insure that that body which carries out the governing function of the medical staff shall be representative of the medical staff, both hospital-based and voluntary, and that this body shall advise the governing board of the hospital on policy regarding medical judgment and skill and on matters relating to the bylaws, rules and regulations of the medical staff."

The House also resolved that the AMA urge the JCAH "to give approval to effective staff and section meeting structures which combine two or more hospitals with overlapping medical staffs within a logical geographical area."

(Continued on next page)

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The House adopted a Judicial Council report, "Review of Ethical Considerations Relating to Clinical Laboratories," which ended with this paragraph: "Where it is necessary for the attending physician to bill his patient for services performed by a clinical laboratory, the bill submitted by the attending physician to his patient should state the name of the clinical laboratory performing the services for his patient and state the exact amount of the laboratory charge paid or to be paid by the physician to the clinical laboratory."

Also adopted was the resolution that the "attending physician is entitled to fair compensation for the professional services he renders. He is not engaged in a commercial enterprise, however, and any markup, commission or profit on the services rendered by a laboratory is exploitation of the patient."

Blood Donors

The House encouraged "state medical associations to actively promote state legislation to provide that persons age 18 or over may donate blood without the necessity of parental permission or authorization and without restriction to voluntary or non-compensatory blood donation programs."

Professional Liability

In connection with professional liability, the the House adopted the following statements as recommendations of the AMA:

1. First, that consultant associations "seek the enactment of appropriate state legislation designed to provide a more efficient and equitable determination of malpractice claims and litigation."

2. Second, that state associations, with the help of AMA, "seek the cooperation of hospital associations and third party payers in exploring and developing, if feasible, pilot programs which will provide scheduled benefits for persons injured as a consequence of medical accidents occurring in the delivery of health care, irrespective of fault."

3. Third, "that workshops on malpractice insurance problems be conducted, as requested by

the Board of Trustees, in which participation will be invited from (1) physicians confronted by insurance problems, (2) representatives of the insurance carriers, (3) staff attorneys of AMA and other appropriate staff personnel, (4) representatives of and attorneys for the hospital service field, (5) nurses and (6) legislators."

In addition, the House resolved that the AMA "should not attempt to establish a nationwide professional liability insurance program either by sponsorship of a program underwritten by an existing insurance carrier or by seeking to establish a new insurance carrier."

Smoking and Health

The House resolved that the AMA "again urge its members to play a major role against cigarette smoking by personal example and by advice regarding the health hazards of smoking" and "discourage smoking by means of public pronouncements and educational programs." It also resolved to "indicate to the Congress of the United States the incongruity of the expenditure of tax dollars to promote the production and sale of tobacco while at the same time spending other tax dollars to discourage cigarette smoking because of its hazard to health."

Food Mixes

The House requested the U.S. Food and Drug Administration to "favorably consider the proposal of the Council on Foods and Nutrition regarding labeling of fatty-acid composition" of food mixes, and that the Council on Foods and Nutrition "undertake the development of a rational proposal for identifying and labeling other nutritionally significant components of convenience foods."

Protective Headgear

The Committee on the Medical Aspects of Sports was asked by the House "to continue its efforts to utilize and publicize existing research and recommendations on football helmets to assure optimum protection for players against impacts which cause head and neck injuries" and "to do everything possible to discourage the practice of 'spearing.'"

Credit Cards

Two resolutions concerning the use of credit cards to pay for medical care were referred to the Judicial Council for information, "with the expectation that additional opinions will be rendered as experience accumulates." In certain states, the Reference Committee pointed out, a charge card system is under experimentation by the state medical society and is deserving of a chance to prove its merits. Also, the Judicial Council has ruled that the use of a charge card system should be flexible and at the discretion of the individual state medical societies.

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References: 1. Danhof, I. E.: Report on file. 2. Hoon, J. R.: Arch. Surg. 93:467 (Sept.) 1966.

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THE WASHINGTON SCENE



A Summary Report Prepared by the Washington Office of the Amer- ican Medical Association.

The Internal Revenue Service plans to audit the federal income tax returns of physicians and other health practitioners who have received more than \$25,000 a year in medicare and medicaid payments.

Plans for the special audit were disclosed by IRS Commissioner Randolph W. Thrower at the first of a series of public hearings the Senate Finance Committee is holding in its investigation of the rising costs of the two government health care programs. He said the Department of Health, Education and Welfare had agreed to require intermediary insurance carriers to use physicians' social security numbers on reports of payments under the program in the future.

Finance Committee Chairman Russell B. Long, (D.,La.) estimated "possibly as many as 10,000" had been getting upwards of \$25,000 a year under the programs. Thrower said the initial audits would be for 1967 and would be limited to those receiving more than \$50,000.

Long said that the investigation of the committee's staff so far showed "widespread abuse, and fraud, as well as lax administration."

Robert M. Ball, social security administrator, reported his investigators had looked into more than 700 possible fraud cases under medicare. He said more than 300 of these cases were still in some stage of inquiry, and that 14 had been turned over to the Justice Department for prosecution.

"But these should not be taken as a reflection on the 200,000 doctors participating in medicare," Ball said. He added a bigger problem than outright fraud were "cases that don't become fraud."

HEW Undersecretary John G. Veneman told the committee that the Nixon Administration want congressional authority to stop medicare payments to doctors who overcharge, use inferior supplies or engage in fraud.

"Under present medicare law, there is no authority for the program to deny reimbursement

to a licensed practitioner, who has demonstrated a clear pattern of fraud, repeated overcharging of the program or the use of supplies which are inferior or harmful," Veneman said.

"We are recommending authority . . . to discontinue future reimbursement and to put all parties on notice to this effect where on the basis of clear evidence, a finding is made that this is justified by reason of such abuses."

Commenting on the hearings, Dwight L. Wilbur, M.D., president of the American Medical Association, said that the vast majority of physicians serving medicaid patients are not overcharging for their services.

"Most physicians," Dr. Wilbur said, "are acting honorably and with utmost restraint. Fortunately, very few M.D., participating in medicaid are guilty of overcharging and otherwise exploiting the program. Such exploitation by a miniscule minority was unavoidable. . . .

" . . . The medical profession is making a great effort to identify and weed out dishonest doctors who betray their oath as professional men serving the public. We have been successful in this search, but a few physicians remain who still are not identified. We shall search them out and expose them, for the good of the entire profession."

Meantime, HEW issued a regulation limiting the fees paid by states to physicians, dentists and other health practitioners under medicaid.

Under the regulation, a state's medicaid payment to a physician for a service will be limited, with one exception, to the 75th percentile of the customary charge — the maximum customary fee of 75 per cent of the physicians in the area.

If a state has been paying more than the 75th percentile of the customary charge, it must not exceed the medicare level, about the 83rd percentile.* A medicaid official said that only two only two states may have to roll back their fees, but declined to name them.

(Continued on Page 427)

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Dosage: One 350 mg. capsule, 3 times daily and two at bedtime is suggested as the adult starting dose. Adjust to suit individual requirements. Daily doses above 3000 mg. are not recommended.

Contraindications: Known hypersensitivity to tybamate. Since no studies have been done with this drug in human pregnancy, it should not be used in pregnancy unless the potential benefit outweighs the risk.

Warnings: Administer cautiously to patients receiving phenothiazines or other CNS depressants or having history of convulsive seizures (See Adverse Reactions). Consider possibility of additive actions with alcohol or other psychotropic agents, particularly phenothiazines or MAO inhibitors.

Precautions: Avoid abrupt withdrawal after prolonged use, although withdrawal symptoms have not been reported to date. Exercise caution in addiction-prone individuals. If symptoms of hypersensitivity occur, discontinue at once and initiate appropriate symptomatic treatment. Avoid activities requiring optimal mental alertness if drowsiness or vertigo are present. As with any new drug, use cautiously in patients with history of drug allergies, blood dyscrasias, and hepatic or renal disease; periodic measurements of hepatic, hematopoietic and renal function should accompany prolonged and/or high doses.

Adverse Reactions: Most frequent reactions, rarely requiring discontinuation of tybamate, include drowsiness, dizziness, nausea, insomnia, and euphoria. There have been a few reports of skin rash, urticaria, and pruritus. Rare side effects include hyperactivity, fidgetiness, flushing, and tachycardia, suggesting excessive stimulation; also ataxia, unsteadiness, confusion, feeling of unreality, "panic reaction," fatigue, headache, paresthesias, vertigo, gastrointestinal disturbances, glossitis, and dry mouth. Grand mal or petit mal seizures have been reported in a few hospitalized psychotic patients receiving tybamate (up to 6000 mg. daily) together with phenothiazines and other psychotropic agents, but not with tybamate alone. Consider the possibility of rare, serious adverse reactions such as may occur with the related drug, meprobamate. If excessive amounts are ingested, gastric lavage and symptomatic therapy, including central stimulants as necessary, are recommended. Before prescribing, consult package circular.

Supply: Tybatran (tybamate) is available in green, sealed capsules of three strengths: 350 mg., 250 mg., and 125 mg. Each strength is supplied in bottles of 100 and 500.

WASHINGTON SCENE

(Continued from Page 424)

After July 1, 1970, states may request permission to increase physicians' fees above the 75th percentile if two conditions are met:

1. The average percentage increase requested above the 75th percentile on January 1, 1969, may not exceed the percentage increase in the all-services component of the Consumer Price Index (adjusted to exclude the medical component) or in an alternate index designated by the Secretary of Health, Education and Welfare.
2. Evidence must be clear that the providers and the states have cooperatively established effective utilization review and quality control systems.

The new fee regulation also requires states to revise their medicaid plans to include descriptions and details of their payments structures. A state that wishes to revise its payment structure for practitioners' services or change the payments authorized under it may not do so until the proposed changes have been approved by the Secretary of Health, Education and Welfare or his representative.

States that begin their medicaid programs after July 1, 1969, must arrange their payment structures so that fees do not exceed the 75th percentile of customary charges.

HEW estimated the regulation would result in a saving of \$65 million in the first year.

Despite a strong protest by the American Hospital Association, HEW discontinued the overhead medicare-medicaid percentage allowance paid to hospitals, extended care facilities and other institutional providers. It was two per cent for non-profit and one-and-one-half per cent for proprietary institutions. The action was effective July 1, 1969.

Another new medicaid regulation requires states to provide periodic health screening, diagnosis, and treatment for all eligible youths under 21 years of age, effective July 1, 1969.

HEW also established a new classification of institution — called intermediate care facility — eligible to receive federal contributions for the care of aged, blind, or disabled recipients or public assistance is covered in another regulation. This should reduce costs of medicaid by allowing states to relocate substantial numbers of welfare recipients who are now in skilled nursing homes in lower costs institution, HEW said.

* * *

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Dr. Roger O. Egeberg, who has been dean of the school of Medicine, University of Southern California since 1964, was selected to be the new Assistant Secretary of Health, Education and Welfare for Health and Scientific Affairs after a five-month delay.

President Nixon nominated Dr. Egeberg after HEW Secretary Robert H. Finch "reluctantly and regretfully" withdrew his unannounced but widely-publicized selection of Dr. John H. Knowles, director of Massachusetts General Hospital, Boston. Finch said that "the protracted and distorted discussion" about the appointment during the five months the post had been vacant "resulted in a situation in which he (Knowles) would not be able to function effectively in this critical position."

The news media — press, radio and television — generally assigned the opposition to Dr. Knowles to conservative members of Congress, led by Senate Republican Leader Everett M. Dirksen, and to the AMA.

Throughout the public controversy before the appointment, the AMA confirmed its comment to a short statement that it had suggested several names to Finch for the post and that the Association "favored the appointment of someone who would represent the broadest scope of medicine and would not be too closely oriented to any segment of medicine or the health field." Knowles was not one of the physicians on the AMA list.

A few days after the nomination of Dr. Egeberg, Dr. Dwight L. Wilbur, the AMA President, said:

"During the last five months the American Medical Association has been identified repeatedly as a force opposing appointment of Dr. John H. Knowles as Assistant HEW Secretary for Health and Scientific Affairs.

"We held our silence during the last months of nationwide publicity because we agreed with Secretary Finch to make our suggestions to him and then say no more. We did that. The Knowles protagonists obviously did just the opposite....

"In a true sense, we never opposed Dr. Knowles. But we did not support him because we had alternative recommendations."

Those recommended by AMA for the position, Dr. Wilbur said, include:

—Dr. W. Clarke Wescoe, former Chancellor of the University of Kansas, "who withdrew soon after because of personal reasons."

—Dr. Richard S. Wilbur, Palo Alto Clinic,

Chairman of the Council of the California Medical Association, and former Chairman of the Board of California Blue Shield, "who happens to be my nephew, a fact which complicated the situation, but who AMA felt was a well-qualified man for this position.

—Dr. John R. Hogness, Dean of the University of Washington School of Medicine, "who serves in the AMA House of Delegates, at high level in the Association of American Medical Colleges, and who has many other distinguished achievements."

The AMA commended the selection of Dr. Egeberg. In a telegram to Finch, Dr. Wilbur said:

"We look forward to a productive relationship with you and Dr. Egeberg in advancing the health care system for the benefit of all the American people. There are many complex factors involved that will call for the wholehearted dedication and contribution of all in the medical profession and in government."

"We believe Dr. Egeberg will be able to bring about the necessary close coordination between government and private sectors in the health care system," Dr. Wilbur said in a supplementary statement. "This is vital to constantly advance and expand the ability to provide quality health care for all Americans."

Dr. Egeberg, 65, is a large, bluff man of Norwegian stock who demonstrated a sense of humor at his first news conference. He is a member of the AMA and a diplomat of the American Board of Internal Medicine. Generally considered a moderate liberal on health matters, he served on several advisory commissions during the Kennedy and Johnson Administration and on the state level in California. One of his major interests has been health care of the poor and he arranged for the USC medical school to be the medical consultant for the neighborhood health center in the Watts district of Los Angeles.

At his first news conference in HEW, he classified delivery of health care as almost the department's number one problem. He said medicare now is "rather well established" in solving a problem. But medicaid, he said, "has run afoul of a number of things, and I don't know that one can blame any one person or any group for this."

A member of the army medical corps in World War II, he was personal physician and aide-de-camp to General of the Army Douglas MacArthur, 1944-45.

Medical Crises — The Elective Surgical Patient

To the Editor:

The hospital posture in the Providence, R. I. metropolitan area is changing rapidly. The increase in the number of breath-taking surgical procedures, extraordinary methods of saving and prolonging life, medicare, medical school affiliation, and union entrance into the health facility, combined with increased numbers of physicians, have severely taxed the existing facilities.

The major hospitals have all seen the appearance of waiting lists and categorization of patients as to severity of their illness. The squeeze is slowly being felt by the smaller hospitals in Rhode Island. Those with no problems today will be overtaxed in five years as the population changes.

Certainly the hospital administrators and trustees are aware of these changes and are sincerely trying to find solutions. Unfortunately it appears that each time a problem is solved changes in medical care tax the system more severely. The Ambulatory Care Center at the Rhode Island Hospital is a marvelous concept; but close to it is the Multiphasic Screening Center capable of evaluating hundreds of patients a week and ultimately referring many more patients than can be handled for further diagnosis and treatment. As the central health planning agencies coordinate the health purveyors there will be further improvement, but years away.

The problem of proper inpatient bed utilization is with us today and will be for some time. How can the health services be equitable in the care of the dangerously ill and the patient with a "non-debilitating" physical deformity! The concept of total care of the patient is a favorite of the various planning agencies. Is the fear of the elective operation by the patient any less than that of the acute abdomen? The several weeks to months that some must wait for surgery can be emotionally exhausting to say nothing of the changes in the pathological condition which may affect the outcome. The elective patient is having "selective care" facilities made available to him, but there is still insufficient space. If not presently experiencing the problem, all physicians are aware of its existence and it is spreading to community areas as more specialized procedures are performed locally.

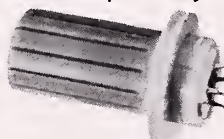
It is incumbent upon all involved to plan for the future. The present cannot be ignored. The Hospital Association and Planning Councils are developing good long range policies, but there is very little insight for the next three to five years.

I believe more can be done inexpensively in terms of construction and providing of services. The use of satellite ambulatory operatories providing the sophistication of equipment necessary but no food or overnight facilities can serve a useful function. The fear of fractionalization of services was valid in days past, but the quality of the physician today is bringing much more knowledge and abilities to the local communities. Community health centers and home care concepts are also being developed in this area. The availability of life support systems for untoward reactions is necessary in such contemplated facilities, but not the many other cost inflating ancillary services. The patient would not be ill in the classical sense but would require surgical intervention which when completed would not change his general condition allowing him to return home for convalescence. Improved utilization of acute hospital beds would be provided, and more rapid correction of the dis-

(Continued on Page 435)

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chlorthalidone

Indications: Hypertension and many types of edema involving retention of salt and water.

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Warning: With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur.

Use with caution in pregnant women and nursing mothers since the drug may cross the placental barrier and appear in cord blood and since thiazides may appear in breast milk. The drug may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of childbearing age, balance benefits of drug against possible hazards to fetus.

Precautions: Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated.

Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria.

Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

Adverse Reactions: Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic hypoten-

sion, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresis, and photosensitization.

Average Dosage: 50 or 100 mg. with breakfast daily or 100 mg. every other day.

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MEYER SAKLAD recently accepted appointment as the director of a new experimental Laboratory Education Advancement Program called "LEAP." The Division of Biological and Medical Science at Brown University will help high school students between fourteen and fifteen years of age with unrealized academic potential for careers in medicine, towards careers in medicine.

* * *

GUY SETTIPANE and GEORGE BOYD had their exhibit on Hymenoptera allergy at the recent meeting of the American Academy of Allergy at Bal Harbour, Florida. A photograph of it appeared in the newspapers.

* * *

The American Psychiatric Association and the Rhode Island Society for Neurology and Psychiatry at a recent joint meeting elected LOUIS SORRENTINO as President. Filling out the slate are GUNNAR NIRK, Vice President; ELLIOTT URDANG, Secretary-Treasurer; MARIO NICOTRA, Councillor-at-large. HUGO TAUSSIG will be the Alternate Delegate to the district branches. Guest speaker of the evening was VINCENT ZECCHINO, who related his experiences on his volunteer tour of duty with the "S.S. Hope."

* * *

The Rhode Island Thoracic Society recently selected this slate of officers: President-Elect, JORGE BENAVIDES; Vice President, HERBERT CONSTANTINE; Secretary-Treasurer, BEN C. CLOUGH; Member-at-large of the Executive Committee, DAVID N. NEWHALL; Councillor to the American Thoracic Society, JOHN HAM. GUY SETTIPANE continued in office as President.

* * *

ROBERT DAVIS, according to a recent announcement, is a new Trustee of the Inter-Hospital Organ Bank, Incorporated.

* * *

At its recent annual meeting the Radiological Society of Rhode Island, a Chapter of The American College of Radiology, elected the following slate of officers for the ensuing year: President, CHARLES E. BROCHU; Vice President, JAMES F. BOYD; Secretary, DAVID R. HALLMAN; Treasurer, JAMES LEACH; Councilor for 3 years, DAVID R. HALLMAN; and Alternate Councilor for 1 year, JOHN J. O'BRIEN.

* * *

The Baker Building to house the administrative offices of the Tennessee Department of Mental Health was recently dedicated in honor of JOSEPH BAKER, Superintendent at Butler Hospital. The building is part of an eleven million dollar, six hundred and eighty-eight bed complex at Arlington, about twenty miles from Memphis. Doctor Baker was Commissioner of Mental Health in Tennessee from 1959 to 1965.

* * *

DAVID G. QUIGLEY and AMINE MAALOUF received appointments to the Active Staff of the Rhode Island Hospital in the Department of Orthopedic Surgery and Fractures. A new member of the Consulting Staff at the Rhode Island Hospital is ROBERT M. DOWBEN.

* * *

MEYER SAKLAD recently received a citation and a five-year pin from the Rhode Island Hospital for his service as physician-in-charge of the division of anesthesia research. The citation took cognizance of his twenty years of service as chief of the department of anesthesiology before becoming engaged full time in research activities.

* * *

The beginnings of a Pediatric Library at the Rhode Island Hospital have been made in memory of the late REUBEN C. BATES, who served on the staff at Rhode Island Hospital for over forty years. Mrs. Bates, his widow, and the Bates family recently dedicated the memorial. MAURICE ADELMAN, WILLIAM BUFFUM, and HAROLD CALDER, all long-time colleagues, presented brief reminiscences and eulogies of DOCTOR BATES.

* * *

(Continued on Page 435)

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*Clues to
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The heavy smoker with vasospasm

He may be comparatively young or approaching middle age. Typically, he is a heavy cigarette smoker—a pack or more a day for a number of years. Whether smoking is a causative or an important exacerbating factor in peripheral vascular disease is still under discussion. But the vasoconstrictive effects of nicotine are firmly supported by a substantial body of laboratory and clinical evidence, and the close association is now generally accepted.

Thus, a history of heavy smoking coupled with vasospasm may serve as warning signals to the physician. When a diagnosis is established, therapeutic measures are directed toward increasing the local circulation, and appropriate management of the patient's general medical needs should be instituted. These include the important safeguards of keeping warm and refraining from smoking.

Before prescribing Roniacol Timespan (nicotinyl alcohol tartrate), please consult complete product information, a summary of which follows.

Indications: Conditions associated with deficient circulation; e.g., peripheral vascular disease, vascular spasm, varicose ulcers, decubital ulcers, chilblains, Meniere's syndrome and vertigo.

Caution: Roche Laboratories endorses caution in the administration of any therapeutic agent to pregnant patients.

Side Effects: Transient flushing, gastric disturbances, minor skin rashes and allergies may occur in some patients, seldom requiring discontinuation of the drug.

Dosage: 1 or 2 Timespan Tablets morning and night.

How Supplied: Timespan Tablets—150 mg nicotinyl alcohol in the form of the tartrate salt—bottles of 50.



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Important in
total management of
peripheral vascular disease,
vascular spasm or
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**Roniacol[®]
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(nicotinyl alcohol tartrate)

for relief of ischemic symptoms

Convenience of b.i.d. dosage—sustained-release Timespan Tablets usually provide prolonged relief of ischemic symptoms with two doses daily.

Smoothness of onset—the action of Roniacol (nicotinyl alcohol) is smooth and gradual in onset, rarely causing severe flushing.

Selectivity of action—relaxes the musculature of peripheral blood vessels.

High degree of safety—side effects seldom require discontinuation of therapy.

Mild ulcerative colitis may be triggered here...



In mild ulcerative colitis, a number of factors can precipitate an attack: for instance, dietary indiscretion, such as eating raw foods, or emotional overreaction, such as that aroused by financial difficulties. No matter what causes the patient's sensitive colon to "act up," he soon suffers from acute discomfort...and often, from anxiety and apprehension as well. Such patients frequently respond well to adjunctive dual-action Librax® therapy.

Librax combines, in a single convenient capsule, the well-known antianxiety effect of Librium® (chlordiazepoxide HCl) and the dependable anticholinergic/antispasmodic effect of Quarzan® (clidinium Br). Therefore, as Librax helps to relieve the patient's excessive anxiety and reduce his overreaction to stress, it also,

at the same time, helps to control hypersecretion and hypermotility, thus relieving spasm and abdominal discomfort.

With Librax, the dosage schedule is simple: 1 or 2 capsules, t.i.d. or q.i.d., will in most cases bring the patient significant relief of both the emotional and physical elements that contribute to his psychovisceral disorder.

Before prescribing, please consult complete product information, a summary of which follows.

INDICATIONS: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

CONTRAINDICATIONS: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide HCl and/or clidinium bromide.

WARNINGS: Caution patients about possible

combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibitory effect on lactation may occur.

PRECAUTIONS: In elderly and debilitated patients, limit dosage to smallest effective amount to preclude development of ataxia, oversedation, confusion (not more than two capsules per day initially; increase gradually as needed and tol-

or here.



ed). Though generally not recommended, if combination therapy with other psychotropics is indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variations in effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

ADVERSE REACTIONS: No side effects or manifestations not seen with either compound have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These

are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver-function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diet.

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Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ¼ oz. with ophthalmic tip. Complete literature available on request from Professional Services Dept. PML.

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PERIPATETICS

(Concluded from Page 433)

At the Fourth International Congress of Nephrology in Stockholm, Sweden, two Rhode Island physicians — both at the Rhode Island Hospital and Brown University — JORDAN J. COHEN and JOSEPH A. CHAZAN, presented three papers. DOCTOR COHEN, the director of the division of renal diseases, is on a leave of absence, serving a tour of duty with the armed forces.

* * *

The presidential address of JOHN J. CUNNINGHAM, retiring president of the Rhode Island Medical Society, was extracted in the first issue (July 7, 1969) of the new *American Medical News*, successor to the *AMA News*. It expressed concern over the high cost of prepaid plans designed to pay usual and customary fees in full.

* * *

Three new Fellows of the American College of Physicians from Rhode Island were elected at the recent annual meeting: OSWALD D. CINQUEGRANA, MELVIN D. HOFFMAN, and WALTER R. THAYER. HERBERT P. CONSTANTINE and HERBERT RAKATANSKY were elected at the same meeting to Associateship. WILLIAM J. H. FISCHER, JR., Governor from Rhode Island, participated in the business and administrative meetings of the society.

* * *

A large delegation from Rhode Island attended the recent AMA Convention in New York City and the usual satellite meetings. Heading the group from Rhode Island were STANLEY D. SIMON, President of the Rhode Island Medical Society; RICHARD P. SEXTON, President Elect; JOHN J. CUNNINGHAM, Immediate Past President; EDMUND T. HACKMAN, delegate to the AMA; SEEBERT J. GOLDOWSKY, alternate delegate to the AMA and Editor of this Journal; JOHN E. FARRELL, Executive Secretary; ARNOLD PORTER, President of Rhode Island Blue Shield, and EDWARD J. LYNCH, assistant executive secretary.

An exhibit on the Incidence of Hymenoptera Allergy in 4,992 Boy Scouts was displayed at the AMA Scientific Exhibit Section on Allergy by GUY A. SETTIPANE and GEORGE K. BOYD.

IN THE EDITOR'S MAILBOX

(Concluded from Page 429)

ability for the elective patient at a reduced cost in a less frenetic atmosphere would be assured. The Health Planning Council would determine the practical number of such facilities for a county. The

local medical society would then determine who was to erect the facility if desired. The use of the operatory would be open to any licensed physician or dentist on the staff of an accredited hospital, and he could do such procedures as his privileges allowed. Tissue studies, strict operating room technique, classification of procedures and operative reports would all be required. Payment would be on a cost basis only. There could be a surcharge on each procedure to pay a representative of the State Medical Society or insuring agency to evaluate the various facilities at specified times. If indiscretions were noted, the insurance carrier would be advised to stop payment.

At such times as the patient load was adequately handled by the local hospitals the coverage of these small facilities could be dropped if it was felt they were no longer providing necessary services.

Experience gained by us with such a facility has resulted in a cost of thirty dollars (\$30.00) to forty-five dollars (\$45.00) per case doing only three to five cases a day. The costs projected over eight to ten cases a day are reduced to twenty-five dollars (\$25.00) or less. The anticipated advantages are that such facilities could be available on a scheduled basis weekends and early evening.

The objections raised by members of the Rhode Island Medical Society to such a program have been the following:

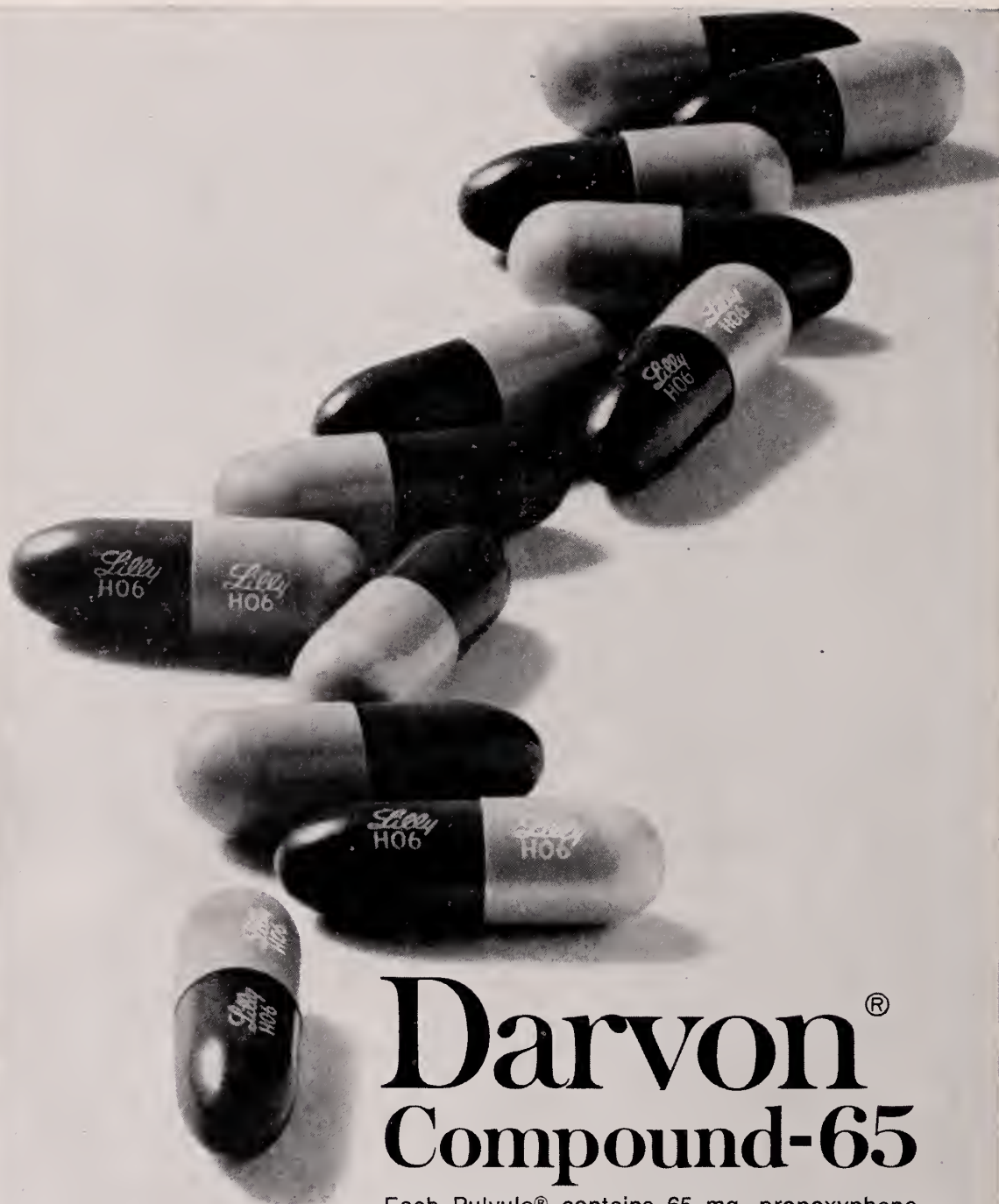
1. Such activities are best done in a hospital milieu with the attendant emergency facilities.
2. The recognition of such a facility would lead to uncontrolled multiplication of others.
3. The control of the quality of care would be difficult.
4. The cost to the community would actually increase because the hospital bed released would be immediately filled by an acute patient.

I have discussed all but the last. This raises a serious point which the insuring agencies must clarify. A person obtaining health insurance assumes that illnesses, major and minor, will be covered as specified in the contract. If in fact the insuring agencies are consciously preventing the development of the facilities to care for those who need care, the public must be made aware that their health needs will be approved only on a priority basis.

Such a concept as I have discussed has several areas of weakness. In the face of an increasing health problem it would appear that a trial period in one or two selected areas would be worthwhile before condemnation on problematical grounds.

CHARLES L. HILL, M.D.

Providence, R.I.



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RHODE ISLAND PHYSICIANS' SMOKING HABITS REVISITED 1963 - 1968*

Barring Certain Religious Groups No Population Segment Shows Comparable Improvement

There is reason to feel that changes in the smoking behavior of physicians may tend to presage those of the general population. The basis for recognition of the risks attending cigarette smoking is nowhere greater than among physicians, and their actions may have more impact than their words. In logic one would anticipate that physicians as a group would tend to avoid cigarettes entirely, but while casual observation suggests a definite decrease, clearly there are many who still smoke.

In September 1963 in the weeks just preceding the release of the Surgeon General's report on *Smoking and Health*,¹ Murphy and Tierney conducted a mail-survey of the smoking habits of the medical profession of Rhode Island.² The article concluded with the suggestion of a repeat study after five years, and we are now reporting such a study.

There have been several additional studies of physicians' smoking habits⁶⁻¹³ since the three³⁻⁵ which preceded the 1963 Rhode Island study. Only twice, however, have serial studies been reported in the same population, one pair in England^{3,5} and one in Massachusetts,^{4,6} and these were not recent. In the group of reports as a whole, one gets the impression of a gradual fall in the proportion of doctors who smoke cigarettes commencing well before the Surgeon General's report, but the differences in method, locale, and percentage of response to the questionnaires leave room for very considerable doubts.

METHOD

With the support of the Rhode Island Medical Society, questionnaires designed for comparability with the 1963 study were sent to all the 1,187 licensed physicians thought to be resident in the

ALEX M. BURGESS, JR., M.D. *Medical Research Director of the Brown University Population Studies and Training Center, and lecturer on Preventive Medicine, Harvard Medical School.*

MR. JOHN T. TIERNEY, *Assistant Director of Health, Rhode Island Department of Health.*

State of Rhode Island. However, unlike the 1963 questionnaires these bore the names and addresses of the doctors to whom they were mailed in order to permit follow up of those not responding to the first mailing. The form shown in Figure I was designed for maximum simplicity of response, and folded into a business-reply envelope. A covering letter made clear the joint sponsorship of the Medical Society and the Department of Health.

After the initial response had ceased, a second mailing was sent out to non-residents, and after this too had ceased a 20 per cent sample of the remaining group of non-participants was investigated by telephone to attempt to assess the relationship of smoking to willingness to participate. This latter aspect of the study will be reported elsewhere.

FIGURE I

SMOKING SURVEY Rhode Island Medical Society — Rhode Island Department of Health

1. Do you smoke at present? Yes ☐ No ☐
2. Do you smoke **cigarettes**? Yes ☐ No ☐
About how many per day?
3. Were smoking **cigarettes** at the time
of our previous study (Sept. 1963)? Yes ☐ No ☐

FOR NONSMOKERS

4. Were you ever a regular
cigarette smoker? Yes ☐ No ☐
5. If "Yes," how long ago did
you stop?
(wks) (mos) (Yrs)
6. Why did you stop
7. Please enter your age here
8. Field of Practice:
b) Specialty Which?
- a) General
9. Remarks:

(Continued on next page)

*From The Population Studies and Training Center, Brown University, and The Rhode Island Department of Health.

RESULTS

1. *Response:* The first mailing produced a very prompt response by 837 physicians. Ten physicians had removed their names from the forms and were classified as non-respondents. In general the use of names did not appear to have deterred the initial response, since 70.7 per cent returned usable questionnaires as compared to 70.0 per cent in the anonymous 1963 study.

Further responses after the second mailing resulted in 1,026 completed questionnaires, a final response rate of 86.7 per cent of the physician population. (The figure is based on a population of 1,184, since we have excluded three non-respondents who were found to have left the state.) The tabulations which follow are based on this 86.7 per cent unless otherwise specified.

2. *Current status and change in smoking habits:* Table I summarizes the report of the 1,026 respondent physicians together with the comparable figures from the 1963 study.

TABLE I

Rhode Island Physicians' Smoking Habits 1968
(Based on 1,026 responses to 1,184 questionnaires mailed)

	1968		1963
	Number	%	%
Current Cigarette Smokers	232	22.6	(33.0)
Nonsmokers of Cigarettes	794	77.4	(67.0)
Former Cigarette Smokers	383	37.3	(35.8)
Switched to pipe or cigars	91	8.8	
Stopped altogether	292	28.5	
Never Smoked Cigarettes	411	40.1	(31.2)
Smoked pipe or cigars	98	9.6	
Never Smoked	313	30.5	

Clearly, cigarette smoking has dropped by about one third, from 33 per cent in 1963 to the present 22.6 per cent. (If the figures are calculated on the initial 837 physicians responding to the first mailing rather than on the entire sample, the figure is 21.7 per cent) In addition to the group smoking cigarettes, 18.4 per cent smoked cigars or pipe only, or both. The remaining non-smoking group includes 28.5 per cent who were former smokers and 30 per cent who never smoked. This latter figure has remained nearly constant since 1963 when it was 31.2 per cent.

It was further possible to determine which of our 1968 participants were included in the 1963 mailing. Whether they actually all participated in the earlier survey is not known. However, assuming that this group of 708 physicians were common to both surveys, the reported changes are summarized in Table II.

The striking observation is that of the 183 who stated that they had already quit smoking cigarettes before the fall of 1963, only four had

TABLE II

Smoking Status of 1968 Respondents Eligible For Survey in 1963

	Number	%
Smoking Cigarettes in 1963 (262)		
1968 Continued	157	22.2
Stopped	105	14.9
Former Cigarette Smokers in 1963 (183)		
1968 Still Not Smoking	179	25.4
Resumed Smoking	4	.6
"Never Smoked Cigarettes" in 1963 (253)		
1968 Still Not Smoking	253	35.8
Started Smoking	0	—
1963 Status Undetermined	8	1.1
Total eligible for both studies	706	100.0

started again, whereas among the 262 who were cigarette smokers in 1963, 105, or 40 per cent had stopped. It must be recognized that these figures are not based on 1963 responses, but on the recall of individuals surveyed in 1968. Not all individuals can be expected to date their change in habits with certainty after five years, and these data are thus assumed to be somewhat less precise than those relating to present habits.

3. *Smoking by Sub-groups:* Although some specialties are represented by small numbers, we have tabulated the current and former smoking data by medical specialty in Table III.

TABLE III

Cigarette Smoking Among Rhode Island Physicians by Medical Specialty — 1968

Medical Specialty	Total Replies		Cigarette Smokers	
	Number		1968	1963
General Practice	274	59	21.5	(34.5)
Internal Medicine	158	24	15.2	(27.4)
Surgery	130	33	25.4	(32.0)
Neur. & Psych.	81	21	25.9	(35.7)
Pediatrics	78	13	16.7	(23.3)
Obs. & Gyn.	65	21	32.3	(45.6)
Orthopedics	50	12	24.0	(40.7)
Anesthesiology	44	14	31.8	(35.5)
Radiology	30	7	23.3	(22.2)
Pathology	29	6	20.7	(25.0)
Otolaryngology	24	6	25.0	(25.0)
Ophthalmology	16	2	12.5	(28.6)
Urology	16	3	18.7	(53.8)
Dermatology	13	3	23.1	(10.0)
Neuro-Surgery	9	2	22.2	(42.9)
Miscellaneous*	9	6	66.7	(58.3)
Totals	1026	232	22.6	(33.0)

*Includes: Public Health, Industrial and Physical Medicine

There is obviously considerable variation in the proportion of smokers by specialty, but in all groups with 40 or more members there has been at least some drop over the five-year period. Of these groups the internists have shown the greatest proportional drop — a 45 per cent reduction in cigarette smoking.

By age-group some further trends are noted in Table IV, with some decrease in each.

The distribution of smoking by age group has changed somewhat, in that the highest proportion of cigarette smokers, which was in the 40-49 age group in 1963, is now in the 50-59 group. Obviously over the ensuing years approximately half of those individuals counted in the former group have entered the latter. The clear increase in the mean age of smokers suggests that the young group entering practice includes only about half as many smokers as in 1963.

TABLE IV
Cigarette Smoking Among Rhode Island Physicians
by Age — 1968

Age	Total	Number	Per Cent	
			1968	1963
Under 40	206	42	20.4	(36.8)
40-49	307	71	23.1	(37.8)
50-59	247	63	25.5	(33.7)
60-69	193	44	22.8	(28.4)
70 & Over	13	12	16.4	(13.8)
	1026	232	22.6	(33.0)

4. *Data on Former Cigarette Smokers:* We have been particularly interested in the 332 former smokers who have given up cigarettes. In response to the open-ended question as to the reason for stopping, the primary reasons fell, by age group, into six reasonably discrete categories, as detailed in Table V.

TABLE V
Primary Reason* Given by 359 Physicians**
For Having Stopped Smoking Cigarettes
By Age at Which They Stopped
Rhode Island — 1968

	Scientific Evidence	Occurrence of Symptoms	Because of an Illness	No Satisfaction	Other Non-Health	Self Discipline	Total	Per Cent of All Age Groups
Under 40	71	28	3	18	11	3	134	37.3
40-49	52	35	13	7	4	5	116	32.3
50-59	26	26	12	9	1	4	78	21.8
60 and over	8	11	8	2	1	1	31	8.6
Totals	157	100	36	36	17	13	359	100.0

Per Cent of

All Reasons 43.7 27.9 10.0 10.0 4.8 3.6 100.0

*When multiple reasons were provided, first reason was used

**24 respondents did not specify reason for stopping

Of special interest is the fact that in the two younger age-groups over half (58 per cent) stated that they stopped smoking because of scientific evidence and 21 per cent because of symptoms. In the two older groups, aged fifty and over, nearly

half (45 per cent) had stopped because of symptoms and only 21 per cent because of scientific evidence. A similar but less marked age difference in reason for stopping was noted in 1963. Comparison of the two studies suggests that the impact of scientific evidence has been increasing, while the effect of symptoms has remained essentially unchanged.

The 112 physicians who cited symptoms as their reason for stopping are grouped by symptom in Table VI.

TABLE VI
Symptoms* Which Caused Physicians To Stop
Smoking Cigarettes

Symptom	Per Cent	
	No. 1968	1963
A. Respiratory	91	75.8 (61.3)
Chronic Cough	64	
Dyspnea	12	
Rhinitis	7	
Chronic Irritation of Throat....	6	
Post-Nasal Catarrh	2	
B. Cardiovascular	11	9.1 (12.9)
Angina Pectoris	6	
Tachycardia	2	
Auricular Fibrillation	1	
Extra Systoles	1	
Hypertension	1	
C. Gastro-Intestinal	5	4.2 (6.0)
Hyperacidity	5	
D. Neurological and Sensory	5	4.2 (13.8)
Headache	3	
Nervousness	1	
Slight Tremor	1	
E. Other	8	6.7 (6.0)
Totals	120	100.0 100.0

*Some physicians listed multiple symptoms....

The symptomatic picture has changed little since 1963 except that respiratory symptoms are more common, and cardiovascular somewhat less. A category "impairment of taste and smell" which constituted nearly 8 per cent of symptoms in 1963 was not encountered in the present survey.

DISCUSSION

Most physicians will agree that medical meetings are not as much characterized by "smoke-filled rooms" as formerly. We can take a certain satisfaction, too, that physician cigarette smoking seems to have fallen faster than in the general population where in 1964-65, nearly midway between the two Rhode Island studies, males over 17 were still 51.0 per cent cigarette smokers.¹³

The younger physicians and members of some specialty groups, perhaps especially the internists, seem to have been reacting more than the average of their colleagues to the month-by-month emergence of evidence that cigarettes are a recognized risk factor in relation to a large number of disease states.

(Continued on next page)

The study of physicians in Oregon⁷ which followed the Surgeon General's report presented the lowest cigarette smoking rate and the highest response that has been so far obtained, with the possible exception of our present study. In the interval, studies here and there have shown higher cigarette smoking percentages. It appears probable that physicians, like their patients, were strongly affected initially by the major publicity in 1964, but have tended in many instances to resume smoking.

Our findings do not serve to confirm or deny the hypothesis that the relatively favorable attitude of physicians toward smoking is related to better access to the details of scientific knowledge. We feel that this could be tested in a comparison of physicians with other non-medical professionals, perhaps lawyers, but we know of no such study.

In any case we feel that the physician is in a strategic position to exert a strong beneficial effect on the general population, which would constitute a major contribution to disease prevention. We consider it unfortunate that in some cases he still overlooks this opportunity for service and relies on words rather than deeds. However, barring a few religious groups we know of no segment of the population that has shown as great an improvement over recent years.

Acknowledgements. Dr. Burgess' participation in this study was supported in part by U.S.P.H.S. Grants #CH-00202 and HD-00671. The data were assembled and tabulated by David B. Casey and Timothy Rogers of the Rhode Island Department of Health.

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RHODE ISLAND MEDICAL AUXILIARY RECEIVES FOUNDATION AWARD

The Woman's Auxiliary to the Rhode Island Medical Society received an award of merit for its outstanding efforts in the American Medical Association Education and Research Foundation program for 1968-69. The presentation was made during the Auxiliary's 46th annual convention held at the Waldorf-Astoria Hotel in July.

The Rhode Island Auxiliary had the greatest percent of increase of any state in the Eastern Region.

The national Auxiliary's contribution to AMA-ERF totaled \$428,875.77, which will be given to the Institute for Biomedical Research and to medical schools for unrestricted use.

Rhode Island Auxiliary president for 1968-69 was Mrs. Thomas A. Egan, Providence. Mrs. Daniel Calenda, Providence, served as president-elect, and Mrs. Philip J. Lappin, Pawtucket, was AMA-ERF chairman.

TWO SENTENCE ESSAY

The irresponsible critic never exposes himself to the tough test of reality. He doesn't subject his views of the world to the cleansing discipline of historical perspective or contemporary relevance.

... John W. Gardner, former Secretary of HEW

* * *

ONE SENTENCE ESSAY

We can see farther because we stand on the shoulders of giants.

... Sir Isaac Newton

UNUSUAL CAUSES OF COLOR CHANGES IN URINE

Excessive Metabolites In Infectious Mononucleosis And Paprika Ingestion Are Incriminated

Many extraneous substances which are ingested either as food or as medication may cause color changes in the urine. Certain diseases may also alter the color, such as alkaptonuria, which changes urine to a brownish black, and malignant melanoma, which may turn the urine black.

Among the substances known to cause color changes are the following. Rhubarb and senna may color the urine orange. Parenteral administration of iron may blacken the urine. Methylene blue alters the color of urine to a blue green. Phenopyridine hydrochloride (Pyridium®) turns urine orange. Hemoglobin or uroporphyrins may change the urine to a red color.

This is a report of two causes of urinary color change which to the author's knowledge have not been previously documented.

CASE REPORTS

Case 1. — A 17-year-old boy complained of bloody urine and burning on urination of two days' duration. Significant physical findings were as follows: Temperature was 101 F. The pharynx was salmon red in appearance. There were multiple, discrete, enlarged palpable lymph nodes on both sides of the posterior aspect of the neck.

The urine was a deep maroon color; it had a noticeable antiseptic odor which was suggestive of Lysol.® Microscopic examination of the sediment showed one to two white blood cells per high power field and a large amount of amorphous urates and uric acid crystals. There were no red blood cells in the spun sediment. A chemical test for blood was negative.

Blood studies revealed 5,270,000 red blood cells per cu. mm., a hemoglobin of 13.5 grams per cent, hematocrit of 44 per cent, 17,790 white blood cells per cu. mm. with 19 per cent polymorphonuclear leukocytes, 79 per cent lymphocytes, and 1 per cent monocytes. Many atypical lymphocytes were identified in the smear. A heterophile antibody test was positive up to a dilution of 1:2560.

The clinical course was uneventful. After two weeks of strict bed rest the urine reverted to a normal amber color with complete disappearance of the uric acid crystals and urates. Recovery was complete within six weeks without any residual ill effects.

In this case the urine was seemingly grossly

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bloody, but the impression was false; the color due rather to excretion of large amounts of urates and uric acid crystals, a result of the infectious mononucleosis. It was apparently caused by excessive tissue nucleoprotein breakdown with degradation to urates and uric acid crystals which were excreted in the urine.

Renal disease is a rarity in infectious mononucleosis. Occasionally albumin, a few leukocytes, and red blood cells may be present in the urine; however, no specific urinary findings are characteristic of this disease.

Case 2. — A 62-year-old female complained of burning pain on micturition associated with change in the color of the urine to a dark orange of one day's duration. She denied ingestion of any drugs; however, careful questioning revealed that she customarily used various spices in her cuisine. In the past two days she admitted using unusually large amounts of paprika. Analysis of a midstream urine specimen revealed it to be tinged a deep orange color. Sugar and albumin were absent. Microscopic examination of a spun sediment revealed three to four white cells and a rare red blood cell per high power field. A diagnosis of chemical cystitis due to paprika was made. Within twenty-four hours after paprika was eliminated from her diet the dysuria subsided, and the urine changed to a normal amber hue.

Paprika is customarily used in cooking for both its flavor and color. It is a mild spice which is derived from the ripe fruit of the bonnet pepper (*capricum tetraganum*).

SUMMARY

Two unusual causes of gross color changes in urine have been described. In one the appearance of bloody urine was simulated by urinary excretion of large amounts of urates and uric acid crystals resulting from catabolism of nuclear protein purines in infectious mononucleosis. In the other a deep orange color of the urine with an associated chemical cystitis was due to excessive ingestion of the spice paprika.

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THE DECLINING ROLE OF SURGERY IN PULMONARY TUBERCULOSIS*

Successful Surgical Treatment Of Medical Failures Possible With Low Mortality And Morbidity

Historically, the first attempt to resect portions of lung for pulmonary tuberculosis was made by Block in 1882. He performed apical resections on a female relative with tragic results. In 1891 Tuffier was successful when he resected the apex of a tuberculous lung in a young male. Doyen in 1893 successfully removed a portion of a lobe in a child of ten. After these pioneering ventures surgeons of various countries began to undertake resections of lung, chiefly for suppurative diseases. Up to 1925 there had appeared in the literature eighty-five cases of lung resection with a mortality of 60 per cent. In tuberculosis surgery by 1940 collective series of resection still showed a mortality of 40 per cent for pneumonectomy and 20 per cent for lobectomy. With the refinement of individual ligation introduced by Churchill the overall mortality was still 28 per cent and morbidity 51 per cent. The complications of tuberculous spread, and bronchial fistula and empyema were far too high in spite of careful case selection and improved surgical techniques.

With the discovery of streptomycin by Waksman in 1944 a new era in the treatment of lung tuberculosis began. Resectional surgery was converted from a dangerous venture to a safe definitive procedure with a high cure rate for the proper indications. Thus Chamberlain, who introduced segmentectomy, was able to report in 1953 three hundred resections of this type with a mortality rate of 3 per cent. The Veterans Administration Cooperative Study Group reported a mortality rate of 1 per cent for one thousand five hundred and fifty-four (1,554) segmental resections performed between the years 1952 and 1955.

Mulvihill, reporting for our group at V.A. Castle Point, New York for the period January 1947 to January 1951, showed results as follows:

128 resections with broncho-pleural fistula in 13 (10%) and a mortality rate of 5.4 per cent.	
74 Lobectomy B.P.F. 5 (6.4%) Mortality 3 (4.5%)	
34 Pneumonectomy 4	4 (11.4%)
20 Segmentectomy 0	0

*Read at the 6th Annual Meeting of the Rhode Island Thoracic Society, at Providence, R.I., May 14, 1969.

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The indications for surgery in the early period were destroyed lung, thoracoplasty failure, open cavity, nodules over 2 cm., tuberculous bronchiectasis, and suspected neoplasm. With the advent of the newer drugs effective against the tubercle bacillus, indications for resectional surgery underwent refinement. From the V.A. cooperative studies and the combined reports of the larger sanatoria it became evident that relapse rates following surgery for open negative cavities and for residual nodules under 2.5 were as great as for patients with matched lesions on identical drug regimens without surgery.

In the survey of the VA-Armed Forces Hospitals in the Cooperative Study the first year reported 1,534 operations from the 55 hospitals reporting for 1958-59. From July 1, 1964 to June 30, 1965, 48 hospitals reported 554 tuberculosis operations: 528 primary resections and 26 primary collapse procedures. The last report (1967-68) shows 271 resections and 9 collapse procedures from forty-six hospitals in the study groups.

Table 1 shows the breakdown of the totals of the operations done by the VA-Armed Forces Study Unit hospitals. The periods covered are of twelve months' duration July 1 to June 30 for the years 1962 thru 1968.

PRIMARY RESECTIONS FOR PULMONARY TUBERCULOSIS IN VA ARMED FORCES STUDY UNIT HOSPITALS

Year	Resections	P	L	L&S	S	Resection Deaths
1963	662	41	319	49	199	54
1964	592	37	327	—	186	42
1965	528	18	278	33	155	44
1966	473	28	214	29	167	35
1967	383	12	207	21	128	15
1968	271	7	161	21	67	15

My own series from Veterans Hospital, Providence, Rhode Island has followed the downward trend. There were one hundred and twelve resections, consisting of 83 lobectomies, 23 segmentectomies, and 6 pneumonectomies. There were three post operative deaths, all in the lobectomy group. Figure 1 illustrates the annual totals of surgery for pulmonary tuberculosis over the years 1956 thru 1967.

(Continued on Page 451)

CLINICAL OBSERVATIONS ON DIVERTICULOSIS—DIVERTICULITIS OF THE APPENDIX

Rectal Bleeding in Association With Symptoms of Acute Appendi- citis Suggests Diagnosis

Diverticular of the vermiform appendix may be congenital (or true) and acquired (or false)². Congenital diverticulum of Meckel's type has never been noted in the wall of the appendix. The majority of diverticula so far recorded in the literature appear to be acquired¹.

The incidence according to postoperative or necropsy findings varies from 0.2 to 2.23 per cent⁶.

Radiological demonstration of the abnormality during routine examination of the gastrointestinal tract is infrequent. In a series of 3,932 examinations of the gastrointestinal tract, Kadvinka and Sarasin⁴ found two cases. Feldman in a series of 28,000 x-ray examinations of the small and large intestine found only one case.¹

Fifteen cases of diverticulitis or diverticulosis of the appendix were observed and operated upon at the Rhode Island Hospital during the past twenty-eight years.

CASE REPORTS

1. *Rose G.*, a 48 year old housewife, admitted for elective cholecystectomy for cholelithiasis. At the time of abdominal exploration for cholecystectomy and common duct exploration, a chronically inflamed appendix was removed.

Pathological examination of the appendix revealed the presence of two diverticula. No diverticula were seen in the wall of the large bowel during surgery.

2. *Dorothy A.*, 28 year old secretary, admitted with vague epigastric and right lower quadrant abdominal pain, nausea, and constipation. Examination of the abdomen revealed the presence of a 2x3 cm. right lower quadrant mass. Sigmoidoscopy and barium enema examination were unrewarding. At exploratory laparotomy the appendix was found to be chronically inflamed and adherent to the cecum. Pericecal chronic inflammation was noted. Appendectomy was performed.

Sections of the appendix showed chronic inflammation and the presence of four diverticula. No diverticula were seen in the wall of the bowel.

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land Hospital.

3. *Virginia G.*, 6 year old female, admitted with severe right lower quadrant pain, nausea, and vomiting, preceded by an eighteen-hour history of vague generalized abdominal pain, anorexia, and nausea. Abdominal examination revealed muscle spasm in the right lower quadrant and rebound tenderness. Abdominal exploration revealed an acutely inflamed and perforated appendix. Appendectomy was performed.

Sections of the appendix showed acute appendicitis and the presence of three diverticula, one of which, located at the antimesenteric border close to the tip, was perforated.

No diverticula were noted in the wall of the large bowel during surgery.

4. *Gertrude S.*, 32 year old female, admitted with severe right lower quadrant pain, nausea, and vomiting of twelve hours duration. A clinical diagnosis of acute appendicitis was verified at surgery. Appendectomy was performed.

Pathological sections showed acute appendicitis and the presence of two diverticula.

5. *Ida P.*, 42 year old housewife, admitted for elective cholecystectomy. Cholecystectomy and incidental appendectomy were carried out.

Sections of the appendiceal wall showed the presence of one diverticulum.

Diverticula had been noted in the wall of the descending colon and sigmoid during surgery.

6. *Jennie P.*, 51 year old housewife, admitted for elective hysterectomy for uterine fibroids. Abdominal hysterectomy and incidental appendectomy were performed.

Sections of the appendiceal wall revealed the presence of three diverticula.

During abdominal exploration diverticula had also been seen in the wall of the sigmoid.

7. *Florence W.*, 17 year old female, admitted for elective cholecystectomy. On abdominal exploration a chronically inflamed appendix and the gall bladder were removed.

Diverticula were found in the appendiceal wall (antimesenteric border) on pathological examination.

(Continued on next page)

From the Department of Surgery, Rhode Island Hospital, Providence, R.I.

Diverticula had been noted in the wall of the sigmoid during abdominal exploration.

8. *Alice G.*, 36 year old housewife, admitted for removal of an ovarian cyst. An ovarian cystectomy and incidental appendectomy were carried out.

On pathological examination the appendix was found to be chronically inflamed. Two diverticula were present on the antimesenteric border.

During abdominal exploration no diverticula had been noted on the wall of the large bowel.

9. *Elizabeth G.*, 54 year old housewife, admitted with severe right lower quadrant pain, nausea, and vomiting of 24 hours duration.

A diagnosis of acute appendicitis was made. At abdominal exploration the appendix was found to be acutely inflamed, and an appendectomy was carried out.

Pathological examination showed acute appendicitis and the presence of one diverticulum in the appendiceal wall.

10. *Mark V.*, 40 year old janitor, admitted with rectal bleeding. Sigmoidoscopy was negative, but barium enema examination showed numerous diverticula in the wall of the sigmoid and descending colon. On the fourth hospital day the patient suddenly developed right lower quadrant pain, nausea, and vomiting. Abdominal examination revealed right lower quadrant muscle spasm and rebound tenderness. Abdominal exploration revealed acute appendicitis.

The lumen of the appendix had been occluded by a large fecolith. Several fecoliths were found filling the lumen of three diverticula present on the antimesenteric border of the appendix. Several diverticula were noted on the wall of the sigmoid and descending colon, but no acute inflammation was noted in the wall of the large bowel.

The rectal bleeding ceased, and the patient had an uncomplicated recovery.

11. *Paul A.*, 41 year old truck driver, admitted with severe right lower quadrant pain, nausea, and vomiting of twelve hours duration. Abdominal examination revealed spasm in the right lower quadrant, rebound tenderness, and a 2x2 cm. hard, tender mass in the epigastrium just above the umbilical area.

At abdominal exploration a carcinoma of the transverse colon, involving the mesocolon, pancreas, stomach and nodes along the mesocolon was found, and also an acutely inflamed appendix. The carcinoma was considered inoperable. Appendectomy and ceco-sigmoidostomy were performed. Numerous diverticula were noted on the wall of the sigmoid and descending colon during abdominal exploration.

Two diverticula were discovered in the appendiceal wall on pathological examination.

12. *Gertrude L.*, 43 year old housewife, admitted with severe right lower quadrant pain, nausea, and vomiting of fourteen hours duration. Two weeks prior to admission patient had had an episode of rectal bleeding, which lasted two days. On abdominal exploration an acutely inflamed appendix was removed.

Pathological examination showed the presence of one appendiceal diverticulum.

13. *Arthur B.*, 53 year old city employee, admitted for repair of a large umbilical hernia.

Upon exploration a chronically inflamed long appendix with numerous diverticula was noted. An incidental appendectomy was carried out.

No diverticula had been noted in the wall of the large bowel during surgery.

14. *Allen G.*, 41 year old salesman, admitted for elective cholecystectomy. A cholecystectomy and incidental appendectomy were carried out.

Three diverticula were noted on the antimesenteric border of the appendiceal wall during pathological examination.

15. *John S.*, 14 year old male, admitted with severe right lower quadrant pain, nausea, and vomiting. Appendectomy was performed. The appendix was acutely inflamed.

Sections of the appendix showed acute appendicitis and the presence of two diverticula.

DISCUSSION

Of the fifteen cases ten were females and five males, aged from six to fifty-three. Diverticulosis or diverticulitis of the appendix was discovered during routine abdominal exploration in the course of elective abdominal surgery or during emergency surgery because of acute inflammation of the appendix.

The condition may remain asymptomatic. Appendiceal diverticulosis may be manifested by vague generalized right lower quadrant abdominal pain. Chronic inflammation results in the development of pericecal inflammatory masses which may simulate malignant neoplasm. Some cases follow an acute course, presenting with symptoms similar to those of acute appendicitis.

Rectal bleeding in association with symptoms of appendicitis, and constipation or diarrhea preceding severe abdominal pain may suggest the diagnosis of appendiceal diverticulitis.

Appendectomy is the procedure of choice. Pericecal inflammation and the subsequent development of a right lower quadrant mass may simulate malignant neoplasm and necessitate right colectomy as a definitive procedure.

The most likely theory of the pathogenesis of this condition postulates an increase in hydrostatic tension within the intestinal lumen⁶. Re-

(Continued on Page 454)

WHAT IS FITNESS?*

Physical Fitness, Tranquility, And Love Of Fellow Man Are Essentials Of Happiness

WHAT IS FITNESS?

Fitness means many things to many people. It is much easier to define than to measure. We, as a society and a nation, have far to go in our fitness program. We are at least off the launching pad with the programs of the late Presidents Dwight D. Eisenhower and John F. Kennedy and more recently that of former President Lyndon B. Johnson in setting up and supporting the President's Council on Youth and Physical Fitness; but we are a long way from being in orbit with this much needed program. I shall make reference not only to physical fitness, but also to mental and spiritual fitness, since they cannot be separated.

As one way of defining adequate fitness we could say that it enables the individual to perform his daily chores without interference by fatigue, to have sufficient physical reserve to meet unexpected emergencies safely, and to have enough extra energy to enjoy leisure time. This definition implies a positive approach and cannot be satisfied unless the person is active.

THE PROBLEMS OF MODERN SOCIETY

Women are actually more involved in physical activity than men. This is doubly true for some of the ladies among you who not only hold a job, but also have housework such as cleaning, washing, scrubbing, and ironing; and this activity is important. Most men do very little of this type of work; and, if they are not married, generally will have it done by a maid or other domestic help. This could be one of the reasons why women outlive men. The typical man who works in an office, comes home, slouches in front of the TV set, and has a hard time getting up to change the channels, is a sad situation. Of course when our children see this type of behavior, it is only natural that they too will avoid activity — running, climbing, fighting, kicking-the-can, and such with their mates. Rather they will be found sitting in front of the idiot box for hours. Example is not merely the best way to teach, it is the only way. Whether we like it or not we are constantly being observed by our children and our associates. Many of us make no effort to keep in good physical condition. This is the poorest example possible.

In this age of automation and mechanization

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only 2½ per cent of our population get enough exercise on the job to keep physically fit. Another example of how ridiculous we have become in our affluent society may be seen on almost every golf course in the United States. Here are men and women who need above all else the exercise of walking. What do they do? — drive around the course in a golf cart and feel proud of their indulging in "exercise." Golf cart use should be limited to prescription only. There are individuals who do need them or otherwise couldn't play at all. But it is really quite repulsive to see big-bottomed women and bay-windowed men slump into a golf cart.

I have heard from intelligent persons the observation that our population must be improving in physical fitness since we continue breaking track, swimming, and athletic records. Of course this involves such a tiny percentage of the population that no country can really attribute the feats of its Olympic teams to improved physical fitness in the country as a whole. In fact, were it not for the physical fitness and dedication of a group of sincere Negro athletes, the United States with a white population of 180,000,000 and a Negro population of 20,000,000 would have made a very poor showing in recent Olympic competitions.

LACK OF FITNESS AMONG OUR YOUTH

Another startling problem is the number of our youth who cannot pass either the physical or mental requirements for military duty. This amounts to between 35 and 50 per cent of the eligible group, which is a sad commentary on the way we allow our children to grow up. If you would care to have an opportunity to observe how the situation really is, line up in your local junior high school or high school equal numbers of athletes and non-athletes and try to pick out which are which. The difference in physical condition of the active and the relatively inactive child will be driven home vividly — unless, you happen to live in one of the few communities that has an active physical fitness program in the school system. Most of the school systems in Oklahoma have not taken this problem very seriously. The trained youngster in every instance has a more rugged, more muscular, more vigorous, more dynamic, more exuberant, and

(Continued on next page)

*Presented at the 158th Annual Scientific Assembly of the Rhode Island Medical Society, at Providence, R.I., May 7, 1969.

healthier vital appearance as compared to the untrained or non-exercising student. It has been demonstrated in large schools that when a good physical fitness program is instituted, classroom work on the average improves. A more physically active child will probably be more active also in the academic aspects of school. Parents are a real puzzle in this matter. They will carefully watch their child for the slightest sneeze or sniffle; and when it occurs, rush him to the nearest specialist to protect him against disease. Yet they will do little to assure their child a staunch, active, and vital body. In fact, efforts by educators to introduce an intensified program of fitness for *all* children are frequently looked upon as a nuisance and are combated by parents.

RAVAGES OF INACTIVITY

More than 100 years ago the French scientist de Tarmack stated that "function makes an organ." Conversely "lack of function unmakes an organ." In this age of mechanization what happens when a person uses his muscles too little? The phrase "flabby American" refers to more than just flabby muscles; it implies also flabby debilitated heart (astronaut's heart), blood vessels, liver, intestinal tract, lungs, and respiratory system. The condition is referred to as *hypokinesia*. In this condition there is a vicious cycle — the lack of activity causes less tolerance for activity, and this in turn leads to even greater restriction of activity. The patient begins to age prematurely, loses his zest for life, and develops all kinds of degenerative changes. *Remember we don't stop exercise because we get old; we get old because we stop exercise.* We observe tired individuals who sleep 10 hours, rest all of the time, take naps, and still feel tired. They must become more active to break the cycle. It has been demonstrated repeatedly that when we are unfit we become more tired, rather than less, when we rest. An individual of this sort avoids physical exertion which used to be fun, because it now causes only aches and pain, and makes him huff and puff and feel tired. What can be done about this? A very simple solution is available — start exercising!!! Of course, one should start gradually and start with a simple program that puts moderate demands on heart, muscles, and blood vessels. Truly before long one will feel, look, and act younger and have a much greater zest for living. This feeling of well-being can be aptly exemplified by a good friend and medical colleague of mine. About three years ago he found himself about 30 or 40 pounds overweight and developing high blood pressure, fatigue, high blood cholesterol, and a general sense of not feeling well. After a general check-up he did one thing only to correct all of his difficulties. He arose 15 to 20 minutes earlier

each morning and went out to the local high school track. He would jog a mile (neighbors thought doctor was a little queer!), shower, eat breakfast, and go to work. It wasn't long before he began to lose weight, his blood pressure returned to normal, his blood cholesterol was reduced, and his sense of well-being returned. He experienced increased stamina. In three months his weight, blood pressure, and blood cholesterol were normal; and he stated that he had never felt better or stronger in his life. During this regimen he also limited his intake of sweets, bread, and carbohydrate foods. He did not, however, alter his diet substantially.

A PROGRAM FOR PROGRESSIVE ACTIVITY

There are medical disorders that would limit the amount of activity; but any person, no matter what his state of health, can adopt an individual program of exercises designed especially for him. Much can now be done in the field of rehabilitation. Patients affected by "stroke" formerly considered hopeless cripples now respond to proper work and exercises and become functioning, useful, happy citizens again. Remarkable accomplishments in pattern learning in brain damaged children has led to new understanding of the importance of passive and active exercise in helping children with these disorders to recover near normal physical capabilities and near normal or normal mental functioning as well.

Exercise is analogous to immunization. An injection may cause a temporary indisposition and perhaps soreness, but eventually produces immunity. Every time one exercises till one feels tired, it is immunization against fatigue. Every bit of exercise induces a little more resistance to fatigue. In one respect the analogy does not hold true. While immunizations in many cases will last for months or years without booster doses, physical exercise must be continued at regular weekly periods.

PREVENTIVE CARDIOLOGY

The First International Conference on Preventive Cardiology was held at the University of Vermont in August, 1965. The Conference was attended by physicians, physical therapists, physical educators, physiologists, psychologists, biochemists, nutritionists, sports medicine specialists and rehabilitation experts. Its purpose was to explore causes and prevention of cardiac deaths occurring in recent years in massive and epidemic numbers in the western world. There are approximately 1,000,000 deaths in the United States alone each year caused by heart disease; 250,000 of these occur in individuals under the age of 65. This conference was not too much concerned with the controversial "fat in the diet" problem, but rather with other methods that can be used to prevent premature cardiac deaths. Some of their

conclusions and recommendations are irrefutable in light of the evidence presented. One of the most convincing studies reported was that of Daniel Brunner of Tel Aviv University of Israel. He has studied 5,300 men and 5,200 women who lived and worked in the large collective farm communities. These people were ethnically alike, and within each farm area ate similar food prepared in a single kitchen. The only differences among these people were in how much they chose to eat and what kind of work they did. The results were clear and striking. Heart attacks were two to four times as common in sedentary managerial and clerical workers as they were among men and women (carefully matched by age groups) who worked in the fields. This is reminiscent of two interesting studies carried out in England a few years ago. In the first study in the railway industry the clerks and management personnel suffered two to three times as many coronary heart attacks as did the section hands and personnel involved in actual physical labor. The other study was also carried out in the transportation industry, but involved only the bus drivers and bus conductors in London. The driver, of course, sits all of the time and exercises much less than the conductor, who walks up and down the stairs of the two-deck buses in us in England. The coronary rate was three to four times greater in the drivers.

The most important point brought out at the convention was that exercise does more than increase physical well being; it is also beneficial psychologically and, through mechanisms not yet understood, disposes of excess weight by means other than simple caloric consumption. The psychological benefits can best be characterized by the phrase "*Action absorbs Anxiety.*" When we are using up energy, there is apparently a concomitant dissipation of nervous tension.

INHIBITIONS OF CIVILIZATION

As our civilization progresses, more work is actually done by devices than by man's own muscles. The more civilized man becomes, the more he finds himself obliged to behave rationally and impassively, usually while remaining immobile. Men in less civilized cultures, such as the "Stone-Age" man, would have resolved untenable situations by fight or flight. Either involves physical exercise.

The more "civilized" pattern of behavior as it has evolved through the ages is foreign to man's innate biological nature. When a primitive man made his choice between fight or flight, either would serve to work off the adrenalin that his body has just mobilized as a stimulant for his heart. Civilized man must not display outward signs of fear or overt hostility. Instead of engaging in fisticuffs, he sits still and "takes it." These day

in and day out frustrating situations which he must suffer may do permanent damage to the heart. We must learn to cope with this tension.

Underlying all of civilized man's problems both in keeping fit and in reacting to the stresses that he has devised for himself is the fact that nature has endowed him with two types of muscles and two types of nervous systems. On the one hand the body is under voluntary or conscious control. A signal from the brain travels through the voluntary nervous system to voluntary muscle, where action follows, such as opening of the hand, playing piano, or throwing a ball. On the other hand the involuntary or automatic (autonomic) nervous system sends signals or messages by instinct or reflex action to many visceral organs and hormone producing glands. The automatic nervous system, beyond conscious control, regulates the heart muscle and the muscle layers of arteries. The practical aspect of this problem relates to what can be done to avert, minimize, or even repair the damaging effects on heart and arteries of neglect of exercise, under-exercise, or abuse from unmanageable stress. The value of exercise has been emphasized by Dr. Paul Dudley White.

BENEFITS OF EXERCISE

The prescription in our present state of knowledge is clear. It was unanimously supported among the researchers and clinicians at the conference. It calls for exercise throughout life, avoidance of over-eating, avoidance of tobacco, and avoidance of frustrating situations of the type that can end only in bafflement rather than the satisfaction of a challenge met and something accomplished. We all will have worries, but the healthy well-exercised individuals among us are more likely, than the under-exercised, to be outwardly placid and inwardly capable of reacting equably to stress.

For those people who have gone for too many years with inadequate exercise, the prescription is clear — a graduated program of exercise. Walking is useful, but probably not sufficient. The exercise program should be individualized of course and supervised fairly closely by a competent medical advisor. It appears now that the restrictions placed on post-coronary victims have been too severe. President Lyndon B. Johnson is a good example of a successful post-coronary recovery. The psychological benefits of this approach are probably as important as the increased physical well-being associated with being more active.

THE SCOURGE OF TOBACCO

In regard to "lung fitness" I must discuss the ridiculous habit of smoking. The human organism seems to search out ways to harm itself; tobacco is no doubt one of the most subtle and insidious

(Continued on next page)

destroyers of human lives in existence. It is now generally agreed that there is a clear connection between smoking and cancer of the lung. There is overwhelming evidence, however, that the inhaling of cigarettes leads to other crippling pulmonary pathology, such as emphysema and chronic bronchitis. These occur with as great a frequency among women who smoke as among men. The problem of slow lung destruction and consequent increasing shortness of breath and chronic cough can in some respects be more tragic than cancer. While it may not kill, it can make life's chief pre-occupation the absorption of enough oxygen to survive. To be a lung invalid, to be unable to walk or talk, to be unable to move without gasping for breath can be a living hell. Sir George Godber, Chief Medical Officer of the British Ministry of Health, stated: "It is never too late to stop smoking for the benefit of one's health, and it is never too early to stop for the benefit of those — particularly children — who will be influenced by your example!"

There is an abundance of medical literature indicating that smoking has an inverse effect also on the heart and blood vessels. An old poem that appeared about 1920 expresses well the hold of tobacco on its victims:

Tobacco is a Dirty Weed, I like it.
It satisfies no normal need, I like it.
It makes you thin, it makes you lean,
It takes the hair right off your bean,
It's the worst darn stuff I've ever seen,
I Like It.

MENTAL FITNESS

There are things that we can do to protect our own mental fitness and teach our children to do for themselves. We can better understand ourselves, and acquire insight into our motives, our feelings, and our reactions. The greatest sight is insight. We must be honest with ourselves. After honest appraisal, we must accept ourselves as we really are. When we accept ourselves, others will accept us also. We must have a good sense of humor and be able to laugh at ourselves as well as others. He is a very miserable man who has no sense of humor.

It is important to keep our anger at reasonable levels and not nurse grudges and resentments over long periods. We should seek out what irritates us, and discuss it openly.

We have not been brought up to handle effectively some of our difficult emotions. For most of us it is important at times to be able to cry. While we laugh readily, we find it difficult to cry under appropriate circumstances. We should not be ashamed to cry. As William Hazlitt has said:

"Man is the only animal that laughs and weeps; for is the only animal that is struck by the difference between what things are and what they ought to be."

LOVE OF FELLOW MAN

I am certain that the really great untapped resource of mankind is man's ability to love. I am referring not to emotional or erotic sexual love, but to the feeling that someone has who cares about the welfare of another. The Greeks were astute enough to use three different words for love. *Eros* referred mainly to the erotic, physical, or sexual type love. *Philia* referred to brotherly love for one's family and others related by blood, proximity, or common interests. *Agape* was the all-inclusive love of the living world and all that is in it, a love that encompassed all creation, including all men, all nature, and all of the world. I am afraid that in Birmingham in Alabama, and for that matter in Stillwater, in Tulsa, and in Oklahoma City, we don't see enough of this latter type of love. *Agape* is the most difficult to come by, but I feel the most needed type of love in the world today. Every patient or person we come in contact with we should strive to love and understand, and this is difficult. We can all learn from the lessons in maturity and self-acceptance taught us by the One Great Physician.

SUMMARY

Exercise should be a part of one's daily activities and should be pursued daily, as simply as brushing one's teeth. The kind and amount of physical exercise will vary from person to person, depending upon age, state of health, occupation, and present condition. There is opportunity for improvement in range of activity for all of us.

Thoreau stated that "None are so old as those who have outlived enthusiasm." No matter what we do in life, if we go about it enthusiastically and with positive feelings as to the outcome, we can't help but be better off physically, mentally, and spiritually.

Oklahoma State University
Hospital and Clinic,
Stillwater, Oklahoma



ONE SENTENCE ESSAY

I find myself treasuring every remaining bit of pluralism, everything that stands between us and an all-embracing system.

... John W. Gardner, former Secretary of HEW
* * *

ONE SENTENCE ESSAY

Will his Angina come between them again tonight?

... Advertisement for nitroglycerine

ATTEMPTED SUICIDE IN ADOLESCENTS*

Suicide Prevention Center In Rhode Island Is An Urgent Need

Many recent medical as well as lay publications have publicized the increased incidence of suicide in the USA. "Suicide," according to one such report, "ranks third as a cause of death in the 15-45 year age group of eight industrialized countries."¹ Up to 50,000 Americans took their own lives last year. It has also been estimated that for every successful suicide attempt, there are about 5 unsuccessful attempts—an estimated total of 200,000 in 1962.² The tragedy of self-destruction is repeated once every 20 minutes in this country.³

The suicide rate for college students is about 15 per 100,000, as compared to 11 per 100,000 in the general population (8-9 per 100,000 in Rhode Island). Some 15,000 college students attempt self-destruction each year. This is the highest attempt rate of any group.⁴ According to Blaine, the highest incidence of suicide attempt by Harvard students occurs during the freshman year, and the lowest in the senior year.⁵

There has been an increasing number of adolescent admissions in recent years to the Fuller Sanitarium, as in other psychiatric institutions. Many give a history of attempted suicide or a threat of suicide. During the seven-year period January 1, 1962 through December 31, 1968, there were 224 admissions of adolescents, 12 years through 21 years of age. The 73 adolescents with a story of threatened or attempted suicide are the basis of this study. Age and sex are shown in Table 1.

Seventy per cent of the 73 patients admitted for suicidal attempts or threatened suicide had only one admission, while 30 per cent had had 2-4 admissions and one 11 admissions. Fifty-four, or 73.9 per cent, attempted self-destruction, while 19, or 26.1 per cent, threatened suicide. Twenty-seven patients attempted suicide once, and 27 patients attempted suicide two or three times. The larger number, 52, were single; 21 were, or had been married, of whom 2 were separated and 2 were divorced.

The five most common reasons given for suicide were, in order of incidence, poor relationship to their parents, guilt over sexual activity, breakup with girl- or boyfriend, marital difficulties, and fear of failure in school or poor grades. Other reasons were loss of persons close to them, auditory hallucinations, fear of induction into the mili-

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tary service, post-partum, LSD, loneliness, and depression. Other clinical features are shown in Tables 1 through 9. As is commonly found in comprehensive studies of adolescents, the family history in our experience with attempted suicide in adolescents was found to be significant (Tables 10-13).

(Continued on next page)

TABLE 1. — AGE AND SEX

18—21 years of age	56	76.7%
12—17 years of age	17	23.3%
Females	47	64.4%
Males	26	35.6%

TABLE 2. — DIAGNOSIS

Schizophrenia	22	33%
Adjustment reaction to adolescence	15	20%—72%
Depressive reaction	14	19%
Acute situational reaction	5	6.6%
Cerebral tissue dysfunction	4	5.4%
Anxiety reaction	3	4%
Obsessive compulsive)		
Sociopathic personality)—	2	2.7%
Hysterical personality)		
Psychotic depression)		
Drug addiction)—	1	1%
Schizophrenic reaction to LSD)		

TABLE 3. METHODS USED IN 73 SUICIDAL PATIENTS

Overdose — medication	46	63%
Slashed wrists	14	20%
Other methods	13	17%
Inhaling fumes	Burning	
Drinking lighter fluid	Drowning	
Knife in stomach	Speeding	
Jumping out of car	Shooting	
Ran in front of car	Nails in head	
Jumping out of window		

TABLE 4. — GENERAL PHYSICAL CONDITION

Past illnesses — more than average	46	63%
Somatic complaints — no organic basis	40	54%
Serious illnesses and/or high fever	18	27%
Head injuries	17	25%
Overweight	15	20%
Less statistically significant illnesses (blackout spells, mononucleosis, operation, organic brain syndrome, etc.)	28	30%

TABLE 5. — MENTAL STATUS

Average intelligence	43	60.4%
Superior intelligence	25	33 %
Retarded	5	6.6%

*Presented at the 158th Annual Scientific Assembly of the Rhode Island Medical Society, at Providence, R.I., May 7, 1969

All patients received oral medication together with physical therapy and environmental therapy (Table 14).

COMMENT

This study of adolescent attempts at self-destruction parallels similar studies by Scrut,⁶ and Mattsson and Hawkins.⁷ Our statistical findings are remarkably similar to theirs.

Early recognition and prompt treatment are important. Follow-up treatment after hospitalization is equally important in avoiding further attempts at self-destruction. Family involvement in therapy of the adolescent is a prominent factor in recovery.

I should like to re-emphasize suggestions made in a previous report on this subject.⁸

1) *Thought*: If on careful questioning only the suicidal thought is present, the physician usually need not be greatly concerned; make a note to check on the matter at subsequent visits.

2) *Means*: If Step 1 is positive, questioning should be continued pertaining to *how* the patient might attempt to destroy himself. Positive answers, even if given with flippancy, must be taken most seriously. The physician is now forced to assume the burden of responsibility. In most instances hospitalization will not be necessary; it may be resorted to if the suicidal urges are repeated and severe, and the means are well worked out. Responsibility should be shared with a relative, and referral made to a psychiatrist for consultation.

3) *Action*: There is a world of difference between thought and action. If the patient has taken any kind of action in preparation for violence, the physician's responsibility becomes clear. He *must* share this burden with the family and recommend psychiatric consultation at once.

4) *Attempt*: One suicide attempt greatly increases the likelihood of another. The conditions that brought on the first may still be there to provoke a second. If the physician feels that the patient is actively suicidal, his duty is obvious. The patient must be told that the physician's responsibility may have to go beyond the patient's wishes in order to protect him. Hospitalization must certainly be considered seriously and the relatives consulted. A psychiatric consultation should be the rule.

SUMMARY

Seventy-three adolescents, ages 12 through 21, out of 244 adolescent admissions to a private psychiatric hospital, either threatened or attempted suicide. There were as many girls as boys.

The most common reasons given were poor interpersonal relationship with parents and guilt feelings regarding sex. Eighty-three per cent took an overdose of drugs or slashed their wrists.

TABLE 6. — EMOTIONAL PROBLEMS

Low self-esteem	61	85%
(Words and phrases used by patient to express their low self-image were: unloved, alone, inadequate, failure, inferior, unworthy, unattractive, difficult, no good, bad, a nobody, nothing but a burden, "ugly body," "crippled mind," "wicked girl," "black sheep," "root of all evil," "a mistake ever born," "Dr. Jekyll and Mr. Hyde.")		
Depressed	42	57%
Withdrawn, lonely, few friends	41	56%
Religious conflict	17	23%
Previous hospitalization for mental illness	12	16.6%

TABLE 7. — DEVELOPMENTAL HISTORY
(In those reporting)

Trouble as an infant	30	41%
Births reported as abnormal	20	27%
Pre-natal abnormal pregnancy	17	23.3%
Long, difficult labor	12	16.6%
Unwed mothers of patients	4	5.4%
Mothers reported nausea for 9 mos.	3	4.1%
Childhood History		
Emotional problems reported	43	60%

TABLE 8. — ADOLESCENT BEHAVIOR
(43 reporting)

Acting out	23	31%
Withdrawn	12	16%
Loss of usual interest	5	7%
Compulsive — perfectionist	3	4.1%

TABLE 9. — SCHOLASTIC ACHIEVEMENT

Honor Roll — A's and B's	23	31%
College students	15	20.5%
No interest in school	12	16.6%
Failing grades	8	10.9%
Did well until high school	7	9.6%
Underachievers	4	5.4%
Nurse's training	4	5.4%

TABLE 10. — FAMILY HISTORY

Mental history in family	38	52%
Friction/tension between parents	21	30%
Separated	11	15%
Divorced	8	17%
Attitudes Between Mother and Patient		
Negative relationship with mother	70	96%
Rejected — lack of love	21	31%
Hostile and/or domineering	18	27%
Non-communicative	7	10.4%
Overindulgent — permissive	7	10.4%
Overcritical — rigid	6	8%
Dependent — overly attached	5	7.4%

TABLE 11. — RELATIONSHIP WITH FATHER

Attitudes between father and patient		
Own father	60	82%
Step-father	9	12%
Adopted	4	6%
Negative relationship with father		86%
No communication between them	14	19%
Difficult with patient	12	16.6%
Alcoholic	9	12.3%
Gives only material things	6	8.2%

TABLE 12. — MARITAL STATUS

Single	52	70%
Married	21	30%
Pregnant when married	10	47.6%
Parental disapproval	9	42.8%
Spouse — emotional problems	12	57.1%
Marital Adjustment — 21 married		
Poor adjustment	13	62%
Extra-marital activity	7	33%
Separated	2	9.5%
Divorced	2	9.5%

**TABLE 13. — RELATIONSHIPS WITH FRIENDS
(52 reported)**

No close friends	39	53%
Friends with bad influence	9	12.3%
Well liked and many friends	4	5.4%

TABLE 14. — TREATMENT

Psychotherapy	53	73%
Electric convulsive therapy	16	22%
Indoklon® (Convulsant)	5	6%
Insulin	3	4%

By far the most common diagnosis was schizophrenia, occurring in one-third of the cases. The majority of patients gave a history of a greater than average number of significant past illnesses. Their personalities were described as depressed, lonely and withdrawn, and characterized by very low self-esteem and much sexual guilt.

Approximately 1/3 were of superior intelligence; and 15, or 20 per cent, were college students. Eighty-five per cent gave a history of low self-esteem; fifty-seven per cent were depressed.

Mothers frequently described an abnormal pregnancy with birth difficulties, physical problems in infancy, emotional problems in childhood, or lack of communication in adolescence. Thirty per cent acted out in an antisocial way. Yet thirty per cent were on the honor roll at school.

Fifty-two per cent of the families reported mental illness in the family history. Ninety per cent of the patients reported a negative relationship with their mothers, while 86 per cent reported similar troubles with their fathers.

There were no successful attempts at suicide in this group of patients.

CONCLUSIONS

With suicides on the increase in this country, the need for legislation requiring reporting of suicides and attempted suicides is a timely subject. A recent request by this author for information regarding suicides from 17 Rhode Island hospitals yielded little or no significant data from the 8 hospitals reporting.

The establishment of a "Crisis Center" or a suicide prevention center in Providence for the State of Rhode Island should be an urgent undertaking. A telephone answering service, manned by volun-

teer personnel 24 hours a day throughout the year, would be of great value. Lives could thus be spared, as has been proved in the 109 centers already established in the major cities in the United States.

Acknowledgement:

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SURGERY IN PULMONARY TUBERCULOSIS

(Concluded from Page 442)

Among our cases were these types of pulmonary lesions requiring surgical treatment: tuberculoma of the right lower lobe, bilateral cavitation, extra-pleural plombage thoracoplasty, destroyed right lung, destroyed lobe with Aspergillus, thick-walled cavity of left upper lobe, and empyema and destroyed lobe.

The primary indications for resection now are: adverse medical failures with persistent cavitory disease or necrotic foci; destroyed lung, often with bronchiectasis; certain residual nodules over 2.5 c.m.; unfavorable clinical status because of ineffective drug therapy due to serious reactions or due to early emergence of drug resistant strains of tubercle bacillus; and relapse with significant residual foci.

CONCLUSIONS

There has been a steady decline in the role of surgery for the primary treatment of pulmonary tuberculosis in the past decade. Newer drugs have reduced treatment failures to around ten per cent. With proper indications and timing of the surgical procedure medical failures can be handled with a low mortality and morbidity and a high cure rate.



THE CAPGRAS SYNDROME: A RARE PSYCHIATRIC CONDITION

Love-Hate Conflict Resolved By Directing Ambivalent Feelings To An Imagined Double

Within the last two years we have had the opportunity to observe and diagnose two cases of Capgras's Syndrome, a rare psychotic state seen more commonly in females.

The syndrome was first described in 1923 by Capgras and Reboul-Lachaux¹ in France. Since then many cases have been reported by European authors; there are twelve cases in the American literature. The first case reported by Capgras was that of a female patient who suffered from a paranoid condition and claimed that her husband and daughter were "doubles" or "imposters" who had assumed the roles of their originals. The phenomenon is a type of misidentification, but more complicated and quite different from that seen in schizophrenia. The report of Capgras was titled "L'illusion des sosies," "the illusion of doubles."

Earlier investigators believed that this syndrome occurred only in females. This notion prevailed until 1936 when for the first time Murray² reported the case of a male. The syndrome always occurs as a manifestation of a psychotic state, usually schizophrenia, paranoid type; however it may also be present in manic-depressive or other affective disorders.

There is disagreement regarding the nomenclature of this disorder. French authors consider it a clinical entity, while German psychiatrists tend to classify it as a symptom occurring rarely in schizophrenia and affective disorders.

Capgras's syndrome is not included in standard nomenclature. In psychiatric textbooks it is classified with other unusual psychotic disorders and atypical psychoses,³ together with such conditions as Ganser Syndrome, Folie à deux (double insanity), Gilles de la Tourette's disease, Amok, and other culture-bound syndromes. The Capgras syndrome presents a marked personal specificity as far as the person who is taken as double. In almost all married patients, the spouse is the double. In single patients or widows, relatives, parents, or siblings are the doubles. One of the striking features is that the double is always a very important figure in the life of the patient before and during his illness. Another characteristic is that the patient has clear consciousness, and there is no evidence of organic symptomatology.

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CASE REPORTS

Case 1. — A sixty-nine year old Portuguese housewife was admitted to the Rhode Island Medical Center shortly following the sudden death of her son, a 44-year old school teacher, from a heart attack. She became very nervous, ate poorly, and exhibited some hyperactive behavior and suspiciousness. Prior to her admission she began to complain of a peculiar odor in the house that nobody else could smell. She complained of nausea and vomiting. One night she started to scream saying she couldn't breathe. She was admitted to a general hospital for control of a diabetic condition; while in the hospital she stated that her husband was not her real husband. She believed that something had happened to him, that "he might be dead," and that the man who claimed to be her husband was an impostor. On her return home from the hospital she became withdrawn and uncooperative. She had periods of assaultiveness and destructiveness. She would throw objects and once broke her daughter's glasses. She slept poorly at night, was afraid "they" were going to rob her house, and imagined that people stole things from her house. She refused to eat or take medication. When she was admitted to the Rhode Island Medical Center, she was preoccupied, depressed, and crying. Because of limited comprehension of English it was difficult to evaluate thoroughly her thought content. The psychological evaluation revealed no evidence of organic brain disease. She was correctly oriented as to time and place and was not confused. Her memory for recent and remote events was intact. She presented a serious management problem because of her negativistic behavior. She refused food because she was convinced it was poisoned. Her delusion regarding the double of her husband remained continuously present. The most prominent symptoms were her depressive feelings, suspiciousness, and agitation. Although the diagnosis of organic brain disease had been made initially with a resulting transfer to the geriatric service, she was returned to the psychiatric service two weeks later because of the ab-

sence of organic brain syndrome. The initial difficulty in reaching a proper diagnosis was due to the language barrier.

Case 2. — A 43-year old housewife was admitted for the fifth time to the Rhode Island Medical Center with a diagnosis of schizophrenia, paranoid type. She was first admitted in 1956 when a diagnosis of schizophrenia was made. She was released on trial visit on numerous occasions, but was returned to the hospital twenty-two times. The clinical picture was characterized by feelings of depression, preoccupation, hallucinations, persecutory ideation, and catatonic features. During her first admission she responded favorably to electroconvulsive treatment and later to insulin therapy. The delusion of a double was developed after her second admission. She went to her neighbors to leave the children, insisting they were not hers. She telephoned her mother-in-law and repeatedly asked whether she knew of any birthmark on her husband by which he could be identified. She stated: "I live with a man who looks like my husband but he is different." Another time she stated: "I have not lived with my husband since 1956, but I have been forced to live with another man who looks like my husband. My husband was wonderful to me when he was alive."

DISCUSSION

Originally, based on psychoanalytic theory, the disorder was attributed to a disturbance during psychosexual development.⁴ It was postulated that during an oedipal phase the girl's love object changed from mother to father with the result that she hated her mother. The Capgras syndrome therefore was considered to be an attempt to veil incestuous desires. This psychoanalytical interpretation lost ground with reports of male cases in the literature.² Todd⁵ considered the feeling of depersonalization as an important factor in the etiology of the syndrome. He emphasized the role of archaic modes of thought and attributed the Capgras syndrome to a regression to a primitive mode of thinking with a resulting revival of the primitive notion of a double. One may find the idea of a double in Greek mythology, in the philosophy of the ancient Egyptians, and in the religion of some tribes.

Another factor which Todd considers to play an equally important role in the origin of this syndrome is the mental mechanism of psychophysical dichotomy in the mind of the patient. The double, or impersonator, is regarded as a debased edition of the original. The patient attributes all of the faults or his wish-fulfillments to the double that he would wish the original person to possess.

The interpretation of Capgras's syndrome by Arieti and Meth⁶ is based on psychodynamics. They consider the syndrome as being an unusual form of psychotic displacement: the patient tries to defend himself from becoming conscious of his feelings of rejection toward his close relatives by displacing his feelings to another person, the impostor, who becomes the target for whom he or she has no ambivalent feelings and who may be safely rejected. Enoch⁷ considers the psychopathology of this condition to be based on the feeling of ambivalence. He postulates that two fundamentally opposing views of the same person are present, which eventually leads to the development of the delusion of a double. Murray's² view also follows psychoanalytic lines. He considers the development of infantile sexuality in homosexual males as following the same pattern as that seen in female. The history of his case strongly suggested a latent homosexuality. The most recent case reported in the North American literature⁸ was also that of a male in whom a disturbance of psychosexual development, mainly difficulty in sexual identification, was considered essential to the psychodynamic interpretation of the case.

The onset of the delusion in our first case after the sudden death of her son may be interpreted psychodynamically as an attempt to find a solution for her feelings of ambivalence toward her husband. The conflicting hate and love with which the patient was confronted were met by using the mechanism of a double to whom the real hate could be directed without guilt, which could arise if such feelings were directed toward a loved and respected object.

In our second case again we may postulate that the Capgras delusion has been used as a defense mechanism to solve the problem of ambivalence toward her husband, a university teacher. The patient was unable to adjust to the academic environment, especially when she and her husband moved into one of the fraternity houses on the university campus. She described numerous difficulties with her husband's relatives and some feeling of inferiority on her part brought about chiefly by the pressure put upon her by her in-laws. The case history shows that she was not able to express a hostility feeling toward her husband. She had been born and brought up in New Mexico, but had had to live in Rhode Island after her marriage. Her husband's closeness to his parents had always been a subject of argument. On the other hand, the husband was a good provider, and kind and affectionate toward his wife. In this case love and hate existed together. The patient solved the problem of ambivalence by producing a double in accordance with the phenomenon of Capgras.

(Continued on next page)

There is no specific treatment for this psychiatric condition. Most of the time the delusion of a double disappears when the other psychotic symptoms are controlled with hospitalization and treatment. In our two patients one continued to entertain the delusion of a double after she recovered from her agitated depressed state. The second patient was symptom-free between the numerous acute schizophrenic episodes.

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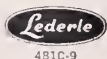
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Biochemistry

DIVERTICULOSIS-DIVERTICULITIS OF THE APPENDIX

(Concluded from Page 444)

current inflammatory episodes in the appendiceal wall may create defect, especially along the paths of penetrating vessels, through which herniation of the mucosa and submucosa occurs. Formation of the diverticula is always associated with defects in the muscularis, through which the submucosa and mucosa are driven by the increased intraluminal pressure^{1,6}.

SUMMARY

Fifteen cases of diverticulum of the vermiform appendix are presented. The clinical aspects, pathogenesis, and treatment are discussed.

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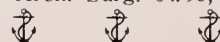
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RHODE ISLAND MEDICAL JOURNAL

ASTHMATIC DEATHS

A recent editorial in *Lancet*¹ calls attention to an apparently increasing mortality from asthma. Possible causes that may be contributing to this death rate are as follows: long term steroid complications, air pollution, and overuse of aerosolized isoproterenol. Prolonged use of steroids may cause adrenal suppression, resulting in decreased ability of the adrenal glands to respond to a physiological stress such as an acute infection or another acute episode of asthma. Unlike primary adrenal insufficiency, Addison's disease, these patients have a low ACTH level and are not pigmented. Therefore, secondary adrenal insufficiency can only be suspected by a detailed history. It is imperative that, when these patients are having an acute asthma episode or other types of physiological stress, their steroid medications be increased as soon as possible, preferably by the intravenous route.

Most physicians have an impression based on clinical observation that air pollutants aggravate existing pulmonary problems such as asthma, chronic bronchitis, and emphysema. This impression was confirmed in 1967 when Girsh et al.² noted that there was a threefold increase in asthma problems during the days of severe air pollution. His study was based on accident room visits for acute asthma correlated with local barometric and air pollution changes. This increased frequency of asthma episodes may also adversely affect the death rate due to asthma.

The overuse of the aerosolized bronchodilators may lead to status asthma and has recently been called the Locked Lung Syndrome. Studies at Johns Hopkins Hospital by Van Metre³⁻⁵ based on an extensive review of asthma deaths at that institution demonstrated this fact. Since then, he has followed twenty-nine living patients who were hospitalized with status asthma secondary to the

locked lungs syndrome. Despite intensive therapy, these patients did not improve until nebulized isoproterenol was discontinued. These patients had been using aerosol "more and more to accomplish less and less."

Upon recovery they were challenged with nebulized isoproterenol in the usual therapeutic dosages with no discomfort, demonstrating the cumulative irritating effect on mucous membranes of the respiratory tract. This effect can be compared to the "rebound" nasal stuffiness that occurs from the excessive use of Neo-synephrin® nose drops. Other mechanisms may also be a factor.⁶ Knudson and Constantine⁷ have described a decrease of arterial PO₂ in asthmatics following inhalation of isoproterenol aerosol. Asthmatics should be encouraged to use aerosol bronchodilators as little as possible, preferably less than seven times a day.

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THERE MUST BE A BETTER WAY

Physicians at the present time are paying out approximately \$75 million yearly for malpractice insurance. This was the estimated cost to physicians for the year 1968. Of this amount malpractice claimants will receive not more than \$20 million, according to Bernard D. Hirsch, general counsel of the AMA.

Of the \$75 million originally paid in premiums, \$15 million will go for sales and promotion, thus leaving a balance of \$60 million. Another \$18 million will go for claims investigations and legal expenses to the carriers. Of the \$42 million remaining, approximately \$35 million will be paid

out to satisfy claims. The \$7 million unaccounted for presumably represents profits to the carrier and additions to reserves.

Out of the \$35 million paid out to satisfy the claims of the aggrieved, the plaintiff's lawyers generally appropriate one-third to one-half to cover payments for their services and other costs of litigation.

Thus it is estimated that of the original \$75 million paid out in premiums by physicians claimants will recover no more than \$20 million.

There must be a better way!

SYNTHESIS OF AN ENZYME — A MAJOR BREAKTHROUGH

A recent cartoon which shows a young boy in an exquisite swan-dive is captioned "The Impossible Today is the Routine Tomorrow" — a good text, we think, for remarks on the first synthesis of an enzyme, ribonuclease. Independently Doctors Robert Merrifield and Bernt Gutte at Rockefeller University, and Robert Denkwalter and Ralph Hirschmann at Merck, Sharp and Dohme have accomplished this feat. The fundamental technological achievement was the linking in the proper order of a series of amino acids. Historically, the first step was the determination of the amino acid sequence in insulin. This presaged the synthesis of a protein; for once the structure was analyzed by dissection, the next step was reconstruction. All of this has come about in seven years since Fred Sanger elucidated the structure of insulin at Cambridge, England. A number of diseases, such as diabetes, are in effect a result of deficiency of a hormone or enzyme. Defective hor-

mones or enzymes are responsible for a number of other disorders.

The manufacture of polypeptides, proteins, and enzymes through synthesis by semi-automated methods has been effected by Merrifield and Gutte at Rockefeller University. These workers utilize a solid-phase reaction in which the amino acids are anchored to a resin in a manner analogous to the anchoring of amino acids on ribosomes by transfer RNA. The finished ribonuclease developed by both teams of investigators has all of the biological and chemical properties of the native enzyme plus its appropriate three-dimensional configuration.

We thus take note of a giant step forward in man's potential to control and alter his internal environment, but even more pertinent his capacity through use of synthetic proteins, polypeptides, and enzymes to treat disease.

NEW PROGRAM OF POSTGRADUATE PSYCHIATRIC EDUCATION IN RHODE ISLAND

The program recently announced by Brown University and Butler Hospital for two-year postgraduate psychiatric education for practicing physicians in Rhode Island who are not psychiatrists is a significant step forward in improving total patient care in Rhode Island.

A grant of \$2,500 from the National Institute of Mental Health to provide funds for this initiative is certainly in the public interest. For this we congratulate Doctor Joseph Baker, superintendent of Butler Hospital, and Doctors Herman B. Chase and Henry S. Uhl, director and associate director respectively of the Institute of Life Sciences at Brown, for their roles in establishing this new approach.

The need for more qualified personnel in the psychiatric field is well known; many emotionally disturbed patients would profit by early recognition and treatment by the family physician. Since the emphasis in psychiatry currently is on treat-

ment, we believe that this new channel of communication between psychiatrist and the family physician will tend to reverse what has been called the "negative image of psychiatrists in the community."

With this new concept of training, the instruction of the family physician and the general practitioner would, as stated in the announcement, be "patient-centered and involve demonstrations and discussions," which would help to bring the psychiatrist back "into the ball park."

We believe that the plan to involve several community hospitals and neighborhood health centers is sound. It will serve too to bring useful psychiatry to more non-psychiatric physicians, thus helping to make the psychiatrist more visible in the medical community.

We hope this new cooperative program has the success it deserves.

PROVIDENCE COMMUNITY HEALTH CENTER

This JOURNAL bids welcome to the new Providence Community Mental Health Center recently established at 369 Broad Street in Providence, Rhode Island. This new service will fill an important need in the community and is a large step in the direction of reducing mental hospital admissions. The cooperation of the City of Providence with the Providence Mental Health Board, under the direction of Mrs. Elizabeth F. Gifford, in set-

ting up the Clinic represents a unique and significant advance in promoting mental health care in the state. Mr. Anthony P. Trivisono, speaking at the formal opening of the facility on April 13, 1969, said, "We must soon find out where the best place is to put our money to meet the major issues of Mental Health." We believe that one very good place is the new Mental Health Center. May it have a successful future!

DRUG ABUSE IN RHODE ISLAND

In view of the apparent increase in drug abuse in Rhode Island, as evidenced by news reports, editorials, and other news media, there is great need to understand the magnitude of the problem and its causation if we are to undertake a program for its solution. The public seems aware of the problem, but has little conception of its seriousness and extent.

Drug abuse encompasses almost all aspects of society — the home, the church, the school, and the community. Only through an extensive program can we ever hope to solve it. The solution must be an all-out war directed at those who have never taken drugs, as well as those who have. The fact that there is an increasing number of youths starting on drugs every day necessitates immediate action.

A Commission to study drug addiction, headed by State Rep. Anthony J. Barone, Chairman, was set up in Rhode Island. Over a five year period it has carried out extensive studies. Its findings and recommendations are contained in a report, dated

April 5, 1968 which is well worth reading. The Rhode Island Medical Society is very much concerned with the problem and is seeking an active role. We must find means of instituting preventive measures and establishing educational programs for our youth. A revision and strengthening of the laws regarding the use of drugs and narcotics having no medical indications and taken without medical supervision is necessary.

There are a number of facilities in Rhode Island designated as treatment centers for the drug addict, which are performing fairly well, namely the Adult Correctional Institutions, the Rhode Island Medical Center, the Charles V. Chapin Hospital, the Mental Hygiene Services, and Marathon House. However, it is obvious that these facilities need better planning, more sustained financial support, and more professional help to raise their programs to an adequate level of performance.

The ultimate solution to this serious problem must involve society generally with everyone taking an active part — the home, the school, and the family physician.

A VANISHING ART

"Psychoanalysis is vanishing," according to Doctor T. Szasz, an analyst affiliated with Upstate Medical Center in Syracuse, New York, and is in fact "in danger of receding into an unimportant sidestream of psychiatry."

Among the reasons given for this loss of popular interest in the past 15 years are:

1. Cheaper, quicker therapies that can reach all levels of society are being emphasized.
2. Psychoanalysis lacks "substantial research" and has "not yet proven effective by any scientific test."
3. Psychoanalysis hasn't kept pace with the growth of psychiatry.
4. Since no major contributions or discoveries have been made in recent years, psychoanalysis is "no longer a frontier."
5. Psychoanalysis suffers from "a lack of research."
7. Psychoanalysis has lost its "capacity to grow."
8. Psychoanalysis is "a tightly controlled shop" and has "little room for doubters or critics."
9. Psychoanalysis is not usually found in a university context.
10. Psychoanalysis is depicted as a "rigidly dogmatic and defensive guild, not plugged into the major intellectual currents of the day."

In a critique written by John Leo of the New York Times it is pointed out that 80 per cent of psychoanalysts work part-time in teaching positions, and also participate in advising schools and social agencies. This trend is worth emphasizing, as some former criticism was directed at analysts

for not adequately fulfilling their community responsibilities. At the present time only 1,255 psychiatrists in the whole country are fully qualified psychonanalysts, while another 2,000, not formally qualified, are working in the field of analysis.

This small group could hardly fill the great need for psychiatric skills, disciplines, and therapies of large numbers of patients. Popular interest in psychoanalysis has declined; it just hasn't met the challenge by growth in knowledge and skills, or in numbers of personnel. Even though most psychoanalysts continue to use the analytic contributions of a past era for contemporary needs, their contribution is nevertheless worthwhile.

It is of interest that the founder and originator of psychoanalysis, Freud himself, had "doubts about the usefulness of psychoanalysis as a therapy." He considered it be a "science of the unconscious rather than a therapeutic procedure." Some European countries, such as Russia, have never employed psychoanalysis as a therapeutic tool.

The discussion in the New York Times is pertinent to the situation in Rhode Island, where there are approximately 63 psychiatrists, but only two fully qualified psychonanalysts, a proportion even lower than the national average. The remaining ninety-seven per cent of Rhode Island psychiatrists are eclectic in orientation. Rhode Island is fortunate in having a much higher ratio of psychiatrists to its population than many other states. It would seem that the psychiatric needs of this area are being met by psychiatrists trained in the effective newer therapies now available.

PHEROMONE, PERFUME, AND PASSION

During the summer months when perspiration is at its height, Madison Avenue tells us how to rid ourselves of body odors and subtly suggests that we substitute synthetic varieties; but a recent intriguing study¹ titled "Estrus-Inducing Pheromone of Male Mice" gives us pause. Pheromones according to the authors are substances produced by animals, which induce specific responses, frequently behavioral and sexual, within members of the same species. In mice, for example, the male excretes a pheromone which induces and accelerates estrus in all of the females in his near environment. Indeed the poor female rat has no choice but to come in heat if her cage is merely sprayed with male urine; a touch of the same placed on the tip of her nose places her in a pitch of passion. The mode of stimulation appears to be through the olfactory receptors. Like perfume, the substance is volatile, is moved around by air, and has an effective range depending upon air movements.

In the essay, which supplied some of the best light summer reading for the scientific community, the researchers W. K. Whitten et al. reporting from the Jackson Laboratory at Bar Harbor, Maine, were able to show that a male is most effective when he is upwind from his female. Apparently males just ooze the substance — some more than others; for it is not only found in the male urine, but is also exhaled through the lung.

A sequel to last summer's light reading is a paper by George M. Happ² of the Department of Biology at New York University. He reports that among insects one sex usually responds only to the pheromone of the other. However, in some species there is deviant behavior wherein both sexes seem to respond to a single pheromone. Happ now adds further excitement by finding that in the

mealworm beetle the male is able not only to exude an excitant with which to attract the ladies, but also simultaneously to exude an anti-aphrodisiac which inhibits the response of all other males in the area to the exciting pheromone of nearby females.

A few years ago a national advertisement proclaimed that "nature in the raw is seldom mild"; most of us would agree. Certainly culturally, if not biologically, we have made the cleansing of our body odors a mark of cultural and economic achievement. Nevertheless, the effect of synthetic "pheromones" applied as perfume has long been understood by the female of our species, and only lately does it appear that the use of volatile, fragrant olfactory stimulants may more properly belong to the male. Kathleen Winsor in *Forever Amber* made quite a point of the natural male odor, an emphasis which at the time was offensive to most readers; but more basically Miss Winsor may have had a point. The washing away of our pheromones and the substitution, without much scientific basis, of various synthetic odors may be leading to some of the bizarre cultural behavior which we have been witnessing of late. Fortunately we cannot wash away the pheromones we exhale, and thus the future of the race is probably secure. As the summer heat rises, so does our fancy; and we can speculate that next in population control may be the manipulation of the olfactory bulbs of ladies by human pheromones as yet undiscovered.

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Guest Editorial

LINGUAL TONSILLITIS

A common complaint of patients is lump in the throat or discomfort on swallowing. Patients presenting with this complaint are frequently thought to be suffering from "globus hystericus syndrome."

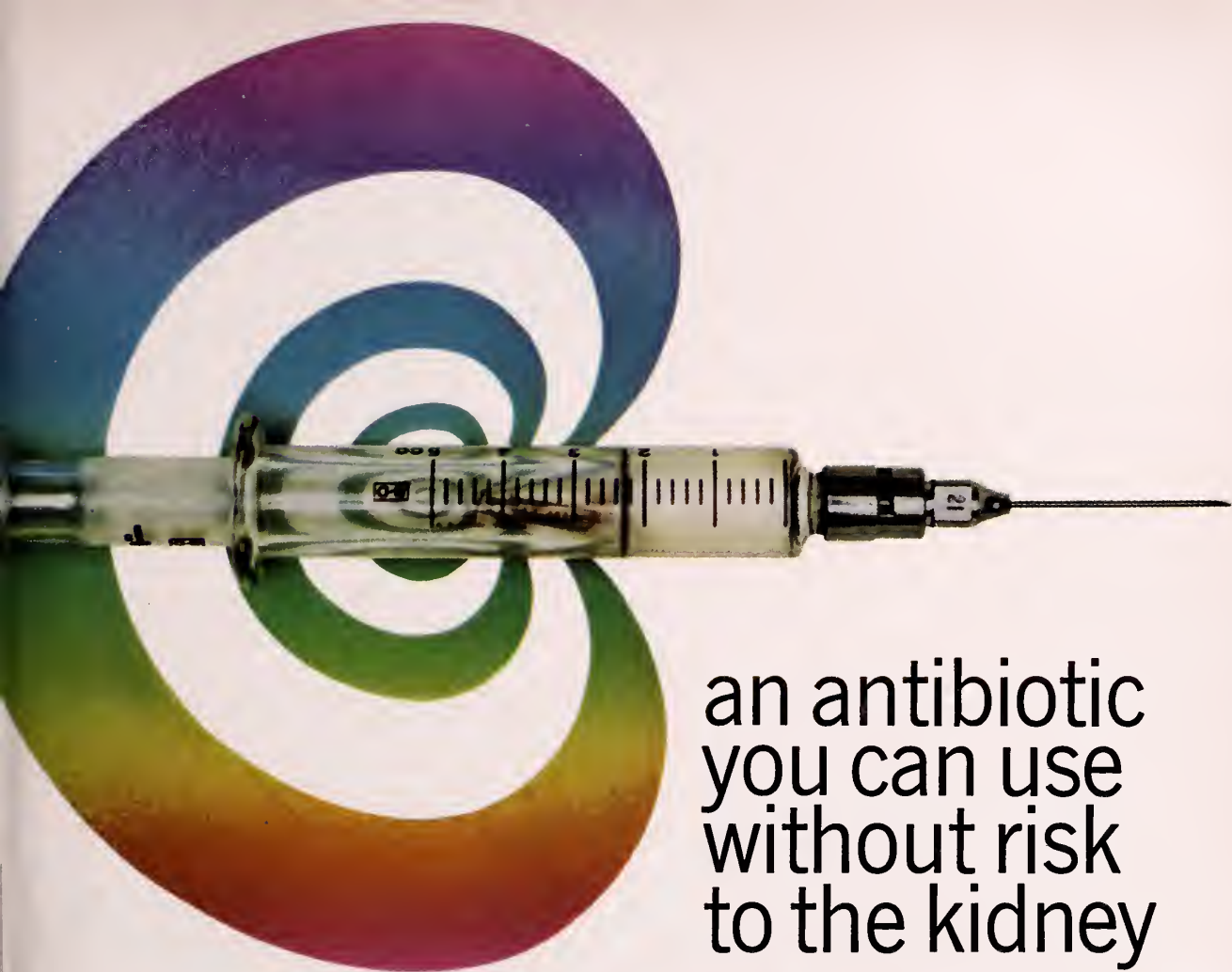
Routine examination reveals very little unusual except some mild nasal congestion with perhaps slight injection of the lateral lymphoid bands and the oropharynx. There may be slight non-tender enlargement of the cervical lymph nodes. Over the past ten years an increase in this type of patient has been noted. Findings by the otolaryngologist have been similar to those of the referring physician except that on indirect laryngoscopy there will be a significant amount of lymphoid tissues at the base of the tongue extending into the pre-epiglottic area. Usually there will be some edema and injection of the tissue also.

This history frequently will be suggestive of a

vasomotor rhinitis or inhalant allergy with intermittent congestion and post-nasal drip. Mouth breathing at night with a dry throat or snoring will be mentioned by the patient. The patient usually is apprehensive and expresses fear of cancer or choking to death. This expression of fear encourages a diagnosis of globus.

If the tissues are acutely inflamed, antibiotics, local heat to the throat, and a suitable gargle will be indicated. A sedative or tranquilizer will calm the patient and promote muscle relaxation. In this disorder the strap muscles are often in mild spasm, thus reinforcing the sensation of a lump. Early use of these remedies will abort the condition in most cases. Occasionally a lingual tonsillectomy by cryosurgery or electrocautery is necessary in recurrent and nonresponsive cases.

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Contraindications: A history of allergic reactions to penicillins or cephalosporins and infections due to penicillinase-producing organisms.

Precautions: Typical penicillin-allergic reactions may occur, especially in hypersensitive patients. Mycotic or bacterial superinfections may occur. Experience in newborn and premature infants is limited and caution should be used in treatment, with frequent organ function evaluations. Safety for use in pregnancy is not established. In gonorrheal therapy, serologic tests for syphilis should be performed initially and monthly for 4 months. Assess renal, hepatic and hematopoietic function intermittently during long-term therapy.

Adverse Reactions: Skin rash, pruritus, urticaria, nausea, vomiting, diarrhea and anaphylactic reactions. Mild transient elevations of SGOT or SGPT have been noted. Black tongue has

been noted in some patients receiving the Chewable Tablets.

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Supplied: Capsules—250 mg. in bottles of 24 and 100. 500 mg. in bottles of 16 and 100. For Oral Suspension—125 mg./5 ml. in 60, 80 and 150 ml. bottles. 250 mg./5 ml. in 80 and 150 ml. bottles. Chewable Tablets—125 mg. in bottles of 40. Injectable—for I.M./I.V. use—vials of 125 mg., 250 mg., 500 mg., and 1 Gm. Pediatric Drops—100 mg./ml. in 20 ml. bottles.

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Warnings: Use with discretion during the second and third trimesters of pregnancy and restrict to patients not cured by topical measures. Flagyl (metronidazole) is secreted in the breast milk of nursing mothers; it is not known whether this can be injurious to the newborn.

Precautions: Mild leukopenia has been reported during Flagyl use; total and differential leukocyte counts are recommended before and after treatment with the drug, especially if a second course is

necessary. Avoid alcoholic beverages during Flagyl therapy because abdominal cramps, vomiting and flushing may occur. Discontinue Flagyl promptly if abnormal neurologic signs occur. There is no accepted proof that Flagyl is effective against other organisms and it should not be used in the treatment of other conditions. Exacerbation of moniliasis may occur.

Adverse Reactions. Nausea, headache, anorexia, vomiting, diarrhea, epigastric distress, abdominal cramping, constipation, a metallic, sharp and unpleasant taste, furry or sore tongue, glossitis and stomatitis possibly associated with a sudden overgrowth of *Monilia*, exacerbation of vaginal moniliasis, an occasional reversible moderate leukopenia, dizziness, vertigo, drowsiness, incoordination and ataxia, numbness or paresthesia of an extremity, fleeting joint pains, confusion, irritability, depression, insomnia, mild erythematous eruptions, "weak-

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ness," urticaria, flushing, dryness of the mouth, vagina or vulva, vaginal burning, pruritus, dysuria, cystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decrease of libido, nasal congestion, proctitis, pyuria and darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified.

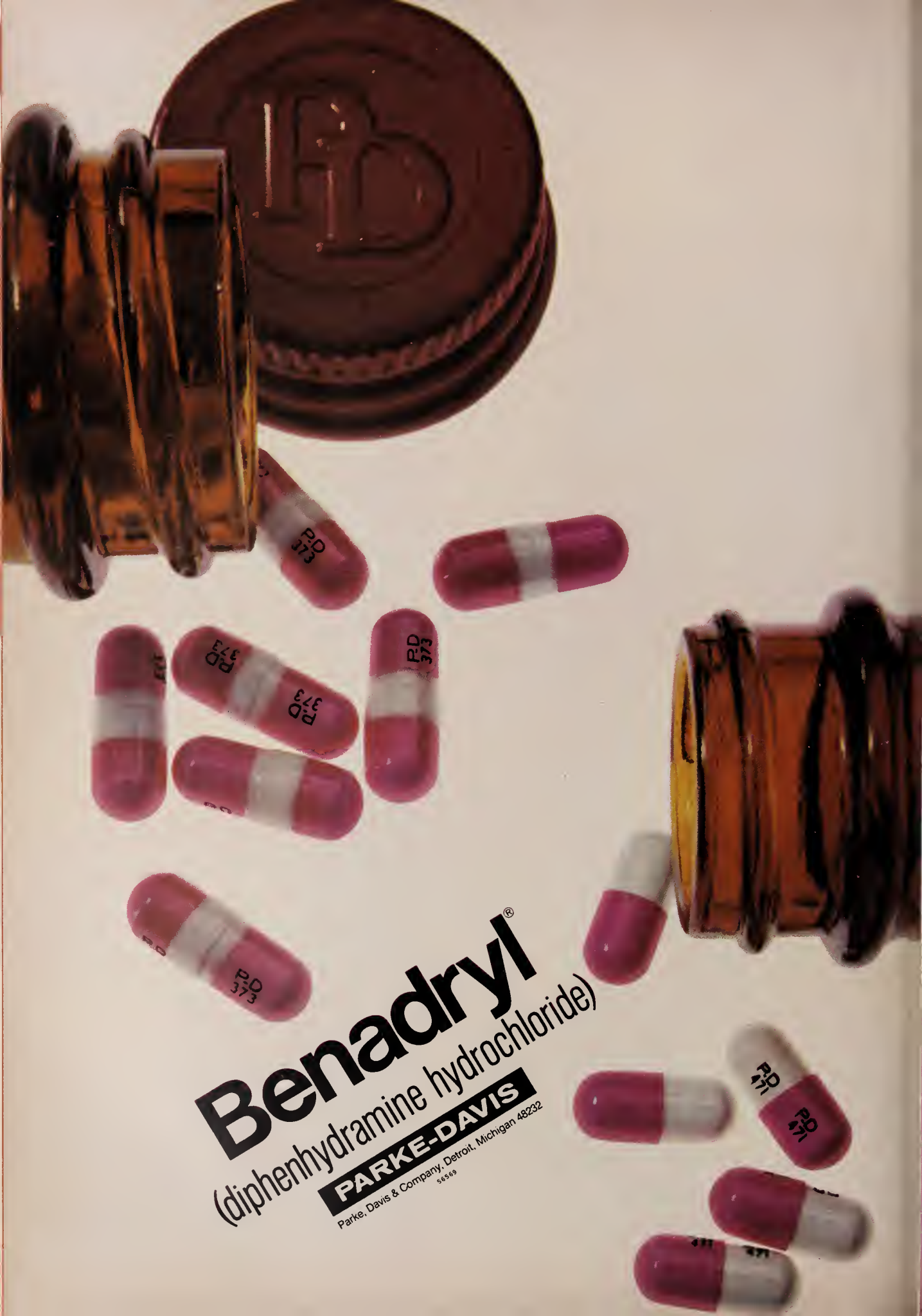
Dosage and Administration: In the Female. One 250-mg. tablet orally three times daily for ten days. Courses may be repeated if required in especially stubborn cases; in such patients an interval of four to six weeks between courses and total and differential leukocyte counts before, during and after treatment are recommended. Vaginal inserts of 500 mg. are available for use, particularly in stubborn cases. *When the vaginal inserts are used, one*

500-mg. insert is placed high in the vaginal vault each day for ten days and the oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment. Do not use the vaginal inserts as the sole form of therapy. *In the Male.* Prescribe Flagyl only when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

Dosage Forms: Oral tablets 250 mg.
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MEDICAL PROFESSIONAL LIABILITY

Report of the Board of Trustees of the American Medical Association to the House of Delegates, July, 1969

At the 1968 Clinical Convention, Resolution 6 was adopted as amended by the House of Delegates and provides that "the Board of Trustees, through the appropriate divisions, councils and committees, continue and expedite its present activities to study and search for solutions to problems of medical professional liability, including containment of costs, availability of adequate insurance for all competent and ethical physicians, and possible legislative remedies designed to control or eliminate unjustified suits against physicians," and that a progress report be made to the House of Delegates at the 1969 Annual Convention.

The following is intended as a progress report in response to the above resolution.

INTRODUCTION

Medical experts who have studied the problem report that the growing incidence of malpractice claims tends to reduce the quality and increase the cost of patient care. They believe that physicians are becoming wary of undertaking heroic, hazardous procedures which are medically justified, but which the legal climate discourages because of exposure to litigation if unsuccessful; that costly x-rays and laboratory tests are being made to confirm findings already known, simply for self-protection.

If patients are to enjoy the full benefits of the art of medicine, treatment must be rendered in an atmosphere of compassion, mutual trust and confidence. This is not possible where physicians are concerned constantly about the threat of malpractice litigation, liability for unexplainable medical accidents, and when judicial bias against physicians is exhibited by some courts. The physician-patient relationship is bound to suffer when the physician looks upon patients as potential adversaries in a lawsuit.

Medical liability has become a serious occupational hazard in the practice of medicine. Unfortunately, the prospect is that the problem will become more acute until a more efficient and equitable legal system for resolving claims to protect both physicians and the public.

MEDICAL LIABILITY INSURANCE

In view of the increasing reliance of the courts upon the physician's liability insurance as an unlimited protection of injured patients, the financial

aspects of this insurance are important. Since World War II, rates have risen at more than three times that of the cost of living. In 1967, average rate increases of 10 to 20 per cent were made by the Insurance Rating Board in 35 states, and in 1968, rates were increased from 10 to 50 per cent in 20 states. Nevertheless, information available to the Law Division of the American Medical Association indicates that the insurance as a whole sustained underwriting losses on this business in every year beginning with 1959.

Based upon financial and other data obtained from various sources, premiums paid for medical malpractice insurance in 1968 amount to an estimated \$75 million, of which the carriers paid \$15 million to produce this business, leaving a net to them of about \$60 million. Approximately \$10 million were spent for costs of administration, miscellaneous taxes, license fees and related items of expense attributable to the underwriting of medical malpractice insurance. The costs involved in loss adjustment — claims investigation and legal expenses — amounted to an estimated \$18 million.

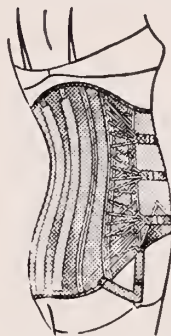
Because of the lag between the time a medical mishap occurs and when it may be reported as a claim, any estimate of losses incurred for a particular year's coverage must provide for claims incurred but not yet reported. For example, most of the claims arising out of medical services rendered during the policy year 1968 will be reported in 1969 and 1970.

Applying the claims experience of recent years to available data as a basis for protection, the A.M.A. Law Division estimates that approximately \$35 million eventually will be paid to satisfy claims originating from medical services rendered in 1968. Considering that plaintiffs' lawyers generally charge from one-third to one-half of the recovery for their services and that there are other costs involved in litigating claims, it may be estimated that malpractice claimants will recover a net of not more than \$20 million.

The Board has requested that workshops on malpractice insurance problems be conducted in which participation will be invited from (1) physicians confronted by insurance problems, (2) representatives of the malpractice insurance carriers, (3) staff attorneys of AMA and other appropriate staff personnel, and (4) representatives of and attorneys for the hospital service field.

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JUDICIAL BIAS

Most medical liability claims are still successfully defended. The growing trend of court decisions, however, favors claimants whenever the cause of injury is medically unexplainable. Where the evidence is conflicting, juries are prone to believe the plaintiff's version of the facts. Often, courts will permit great weight to be given to scanty evidence or flimsy testimony in order to predicate a verdict against the physician under the guise of negligence.

California leads the nation in the statistics of malpractice litigation and in the development of legal doctrines favoring plaintiffs in these cases. In *Clark v. Gibbons* (426 P. 2nd 525, 1967), a justice of the California Supreme Court, in a concurring opinion, explained his dissatisfaction with the Court's "largely fictitious" search for fault in "unexplained" medical accidents that cause "unexpected" injury. Justice Tobriner expressed agreement in "pursuing the laudable goal of shifting the losses occasioned by such accidents" to physicians as "the parties best able to protect against them through insurance." He argued, however, that "such responsibility should be fixed openly and uniformly, not under the guise of negligence and at the discretion of a jury." In advocating abandonment of the pretence of negligence, he concluded that "no useful end is advanced by rehearing the ancient ritual of assessing blame."

The opinion of Justice Tobriner not only acknowledges but urges extension of the Court's biased position favoring malpractice plaintiffs. Actually, the facts and arguments he has marshalled are convincing in support of a contrary view that legislative reform is necessary to restore the traditional requirements of proof of negligence in medical liability cases. The following quotations from Justice Tobriner's concurring opinion are particularly succinct in describing the problems which have been created for the medical profession and the public because of the current malpractice situation.

* * *

1. "In pursuing the laudable goal of shifting the losses occasioned by (inexplicable) accidents to the parties best able to protect against them through insurance, we have imposed the onus of negligence and malpractice upon capable and dedicated members of the medical profession, burdening the law of *res ipsa loquitur* with a sweep that is inaccurate, inefficient, and inequitable."

Comment. This is frank recognition of the inequity in the existing situation in which physicians are often found guilty of malpractice without actual proof of negligence, solely for the purpose of providing compensation to victims of medical accidents. If the reason is simply one of economic ex-

pediency because only physicians and not their patients are covered by adequate insurance, then perhaps some means should be found by which the latter can provide themselves with appropriate coverage.

* * *

2. "If public policy demands that defendants be held responsible for unexplained accidents without a reasoned finding of fault, such responsibility should be fixed openly and uniformly, not under the guise of negligence and at the discretion of a jury."

Comment. Despite Justice Tobriner's support of absolute liability in unexplained medical accidents, he is mindful of the unfairness of judicial findings of negligence on remote grounds, where negligence in fact does not exist, and the unfairness in permitting a jury to make a finding of negligence without supporting evidence.

* * *

3. "At the outset we must recognize that, in the present state of medical knowledge, risks which even the most cautious physician could not have prevented may lead to accidents which even the most expert cannot explain."

Comment. A popular misconception is that medical or surgical procedures carry no risk of incidental injury to the patient if performed properly. The difficulty which plaintiff's lawyers claim to experience in obtaining medical witnesses to testify on their behalf is often because there is no evidence to support such testimony or the cause of injury is medically unexplainable.

* * *

4. "Although the vast majority of medical practitioners are protected financially by liability insurance . . . no technique yet devised can protect a doctor from the devastating impact which an adjudication of malpractice can have upon his professional standing. Fearing that his competence may thus be impugned whenever he adopts a procedure difficult to justify to a lay jury, a surgeon may feel compelled to forego an unorthodox technique in order to protect his reputation from ruin. Any system which thus diverts the doctor's attention from the operating room to the courtroom leaves much to be desired."

Comment. Involvement in a malpractice suit is a time-consuming, emotionally charged ordeal for the average physician even if he is successful in his defense. Winning does not erase this experience nor does it expunge the damage already sustained to his professional and patient relations by the filing of the lawsuit. The concept of shifting economic losses occasioned by unexplainable medical accidents from patients to insured physicians must be weighed against the resulting detriment to the practice of medicine and the public at large.

(Continued on next page)

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The climate produced by malpractice litigation is not conducive to compassionate physician-patient relations which will enable the public to enjoy the utmost benefits of medical science and art.

* * *

5. "In light of the expansion of *res ipsa loquitur* . . . there can be little doubt that the net effect of the doctrine is to shift from plaintiffs to defendants the cost of a certain number of unexplainable accidents in which no meaningful basis exists for finding the defendants at fault. Thus the concept of negligence as prerequisite to medical liability now provides only sporadic and illusory protection for the physician. At the same time, insistence under all circumstances upon a nominal finding of fault frustrates the risk-shifting purpose of the *res ipsa* doctrine as currently applied since it stands as an occasionally insuperable obstacle to the financial protection of inexplicably injured patients."

Comment. This statement accurately reflects the confusion, uncertainty and inequity that currently exists for both physician and patient. Although plaintiffs are winning higher and more frequent awards than prior to World War II, malpractice litigation is still largely an unpredictable game of chance. Some victims of medical accidents are lucky in obtaining large verdicts and others, under circumstances which are morally and practically comparable, receive little or nothing.

* * *

Justice Tobriner has performed a valuable public service by taking judicial notice of how the current state of the law has resulted in gross inequities for both plaintiffs and defendants, and detriment to the public as the recipient of medical care. His proposal, however, that the courts now take the final step in imposing absolute liability upon physicians for accidents which are medically unexplainable as well as those which result from negligence would only intensify a situation that is already precarious. In the absence of a law fixing the amounts recoverable by claimants for various types of injury, inequities in the amounts recovered by claimants would still continue. Finally, in view of the difficulties which insurance carriers now experience in the underwriting of malpractice insurance, imposing absolute liability upon physicians would be likely to make such coverage either prohibitive in cost or unobtainable.

NEED FOR CHANGE

After due consideration of the problems related to medical accidents as they involve patients, physicians and insurance carriers, the Board of Trustees believes that the facts indisputably demonstrate that the present system for compensating

malpractice claimants is unsatisfactory for all concerned. Its costs are excessively high in relation to the compensation finally received by claimants. Most important, the physician and the insurance carrier are forced into a time-consuming and costly legal gamble on the outcome of a trial which often has no bearing on the true merits of the patient's claim. A more efficient system for the protection of both patients and physicians is long overdue.

In the opinion of the Board, there is a broad need for the enactment of state legislation which will restore the traditional concept of requiring plaintiffs in malpractice suits to prove fault. The enactment of such legislation alone will not suffice if the courts continue to be motivated to shape the law out of sympathy for the economic needs of injured plaintiffs.

Accordingly, the Board recommends that in addition to seeking legislation that will assure equity in malpractice litigation, some mechanism for pre-paid protection should be developed which will provide economic protection for persons injured as a consequence of medical or other accidents arising in the course of patient care. If the House of Delegates concurs in the views expressed by the Board, the Board intends to initiate discussions with representatives of Blue Shield, Blue Cross, the American Hospital Association, the insurance industry, and others, for this purpose.

STATE LEGISLATION

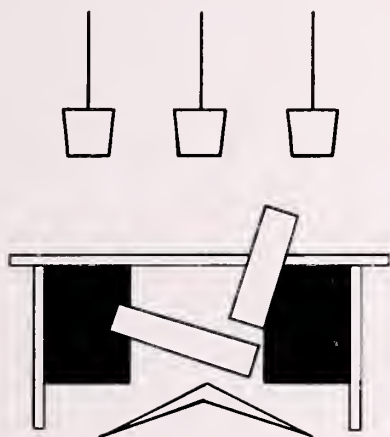
The Board is impressed by the efforts which have been exerted in California to enact appropriate legislation relating to or affecting malpractice litigation. The Board recommends that the state associations make similar efforts to procure the enactment of similar bills. Recently the following bills have been introduced before the California legislature:

1. A bill specifying a definitive one-year statute of limitations applicable in all cases "except only upon proof of fraud or intentional concealment."
2. A bill permitting either party to demand that the issue of the running of the statute of limitations be separately tried before a trial on the merits.
3. A bill copied after the Alaska statute eliminating *res ipsa loquitur*.
4. A bill requiring the filing of a \$500 cost bond in cases against physicians.
5. A bill permitting malpractice insurers and others to make advance payments to an injured person without thereby admitting liability and with the right to offset of such payments against any future award.
6. And finally, a bill protecting the proceedings and records of medical review committees of med-

(Concluded on Page 468)

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PRESIDENTS AND THEIR SURVIVAL

On March 28, after a long series of heart attacks, Dwight David Eisenhower — our 34th President — passed away at age 78. Two former Presidents — Harry S. Truman, near his 85th birthday, and Lyndon B. Johnson, who was 60½ years of age — were alive at the time.

Eisenhower's death has renewed interest in the question of whether the presidency, with its tremendous pressures and strains, tends to shorten life. Yet, Eisenhower lived longer after taking office than might have been expected, judged by the mortality experienced by white men of like age in the period since his inauguration.

Only twelve of our 33 deceased Presidents outlived their expectation of life at inauguration (based on contemporaneous experience). Eight of them took office prior to 1853. Among our first thirteen presidents, Washington, Harrison, Polk, and Taylor died well before their life expectation at time of inauguration. On the other hand, of our more recent Chief Executives, only Hoover survived his expectation of life at inauguration by a wide margin; Truman, our oldest living former President, has also achieved a significant longevity record.

The fifteen pre-Civil War Presidents, from Washington through Buchanan, outlived their expectation of life at inauguration by an average of one third of a year. By contrast, the other 18 deceased men who served as President after 1860 fell short of their life expectancy at inauguration by an average of 8 years. If the four Presidents who were assassinated are excluded, the record for the Presidents who have held office since the Civil War is almost 5 years short of the life expectation at time of inauguration. Even though the Presidents who served before 1860 were about five years older on the average at the time of their inauguration, they lived an average 10 years longer than the men who served since 1860.

Eisenhower was the oldest man to assume the presidency since the Civil War, and the fourth oldest in our history. When he left office at age 70, he was the oldest man to have ever served. So

far, of the post-Civil War Presidents only Hoover (who died at age 90) and Truman have lived longer. To date, John Adams, our second President, has been the longest-lived. Kennedy, the last to be born, was also the youngest to die — at the hands of an assassin, almost 26 years before his time.

...Metropolitan Life Company, Statistical Bulletin, April 1969

* * *

HAWAII ENACTS COMPULSORY DISABILITY INSURANCE LAW

House Bill 55, House Draft No. 2, which establishes a compulsory temporary disability benefits law passed the House (5-8-69) and the Senate (5-14-69) and has been sent to the governor.

By January 1, 1970 employers must provide, either through a private insurance carrier or self insurance, disability benefits equivalent to 55 per cent of wages (maximum benefit \$72.00 per week) for 26 weeks beginning on the eighth day of disability.

Payroll Deduction:

Employers can deduct half of the cost of benefits from wages at the rate of ½ of 1 per cent of covered wages up to a maximum of 66 cents per week per worker. This amount is tied into the state's average wage and is subject to automatic increase. Employers with disability plans in effect on June 1, 1970, regardless of the level of benefits, are relieved of responsibility under this Act if the employer has a contractual obligation with his employees to continue providing benefits.

Hawaii becomes the first state to enact this legislation since 1949 and only the fifth state to do so since the first law was enacted in Rhode Island in 1942. The first three states, Rhode Island, California and New Jersey have established State Insurance Funds and the fourth, New York, uses private insurance carriers like Hawaii will do. The State of Washington also enacted this legislation in 1949 but it was removed from the law books by Referendum in 1950. The Common-

wealth of Puerto Rico enacted a law establishing a State Fund in 1968.

...INSURANCE ECONOMIC SURVEYS,
May-June, The Insurance Economics Society of America

* * *

DATA ON CENTRAL DIRECTORY FOR NURSES

The Directory is a non-profit organization incorporated in 1910 to provide a clearing house for nurses. It is operated by and for Registered Private Duty Nurses with the approval of the American Nurses' Association and the Rhode Island State Nurses' Association. It is located at 17 Exchange Street, Providence.

The Executive Board of the Directory is comprised of highly qualified members from the ranks of Private Duty Nurses, together with the Directors of Nursing Services of local hospitals and the President of the State Nurses' Association.

High professional standards are maintained through a most stringent screening procedure and compliance with professional regulations.

The Directory can assist you in meeting special nursing requirements through referral of competent, qualified Registered Nurses to provide your patients with quality nursing care within the Greater Providence Area.

* * *

INSURE BASEBALL PLAYERS FOR \$25,000 HEALTH PLAN

The major league baseball players' new \$5.45 million pension plan will do a lot more than merely provide ball players with a better life in retirement, reports the Health Insurance Institute.

It also gives active players a \$50,000 life insurance policy and health insurance with a \$25,000 maximum benefit covering both the players and their families.

And this health insurance, says the Institute, will cover costs for all types of medical care including prescribed drugs, nursing care — even local ambulance charges, if needed.

The new package also includes improved maternity benefits, disability income benefits, and a comprehensive dental program that was included in the plan for the first time.

Disability benefits are up to \$700 per player per month (it had been \$500) in case they are permanently unable to work, and maternity benefits now pay up to \$750 (it was \$500).

The administrator of the plan (Equitable Life Assurance Society), says the majority of claims over the past 20 years have been maternity.

The new maternity provisions, which are expected to be widely used, will pay up to \$500 of all charges and 80 per cent of those expenses over \$500 to a maximum reimbursement of \$750.

The new plan — \$1.35 million richer than the previous plan — stipulates a minimum of four years of major league service to qualify for a pension. Previously it had been five years.

For those retiring at 50, the pension will be \$60 a month for each year of service up to 10 years and an additional \$20 a month for each year from the 11th through the 20th.

This means a four-year man will get \$240 a month; a 10-year man \$600; a 15-year man \$700; a 20-year man \$800. Payments can be larger if the player waits beyond 50 to begin collecting.

Under the health insurance part of the baseball plan, the patient pays the first \$50, after which the plan pays 80 per cent of subsequent bills up to the \$25,000 maximum. In hospital, surgical, and maternity expense areas the \$50 deductible amount has been eliminated from the health care plan.

Any player who has been on the roster of a major league ball club for 60 days or more is eligible for the health insurance.

Once the player retires, he will no longer be covered for health care costs, but he is entitled to purchase the protection at the same group rate it is costing the major leagues.

The Institute pointed out that a player's children — up to age 19, and to 23 if they are full-time

(Continued on next page)

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students — are also protected against medical care costs under their father's plan.

The increased health insurance coverage is part of a trend in professional sports where group insurance plans with large major medical benefits are being made available.

* * *

AIM TO ELIMINATE GERMAN MEASLES WITHIN FIVE YEARS

Pre-school and elementary school children will be the target of a nationwide vaccination campaign to wipe out German measles (rubella), the Health Insurance Institute reported recently.

A new vaccine, the U.S. government hopes, will overcome the disease which, although generally mild, is dangerous to unborn children.

As a result of the German measles epidemic of 1963-64, approximately 247,000 women in their first three months of pregnancy contracted the disease. The consequence: 8,000 to 30,000 fetal deaths; 20,000 children born with birth defects.

Once the program gets under way, the U.S. Public Health Service predicts it will never happen again to this extent.

Government officials believe that elimination of the disease is possible within the next five years and have set that as a goal.

But an immediate problem is whether enough of the approved vaccine can be produced before the disease takes its toll in 1970.

Target: 15 Million

To start, approximately 16 million school children are slated for vaccinations in 1970.

During the five-year plan, some 50-75 per cent of American children, starting at 1 to 2 years of age and extending through elementary school are expected to be innoculated.

Pregnant women, according to government authorities are not slated for vaccinations.

The main reason is that it is believed that the vaccine, which causes a mild form of German measles, may react poorly in some women and cause the birth defects it is trying to prevent.

Another reason is the feeling that the vaccination may cause disabling arthritis and joint pains in adult women.

So the emphasis of protecting adult women of childbearing age has been placed on the children.

* * *

EFFECTS OF SMOKING IMMEDIATE AS WELL AS LONG RANGE

That cigarette smoking increases the likelihood of developing cancer or heart disease has been demonstrated, but a recent study has shown that smoking causes immediate effects, even on healthy young men.

At San Fernando Valley State College in California, 400 male volunteers (200 smokers and 200 non-smokers) participated in various clinical tests, including expired-air samples, electrocardiograms, blood analyses, and work-performance assessments.

The immediate effects of smoking that were observed included changes in heart rate and in the T-wave of electrocardiograms and changes in the systolic and diastolic blood pressure while smoking and during exercise. Smokers had faster blood clotting times after smoking than nonsmokers and were less efficient during work tasks.

("Immediate Effects of Smoking on Healthy Young Men," in *Public Health Reports*, Feb. 1969)

* * *

PEDIATRICIANS ANNOUNCE NATIONAL PROGRAM TO TRAIN CHILD HEALTH PERSONNEL

The American Academy of Pediatrics has taken a major step to improve the delivery of child health care in the United States by initiating a national program to train allied child health personnel including pediatric nurse associates, pediatric office assistants, and pediatric aides.

The Academy hopes that more than 6,000 associates, assistants, and aides will be trained within the next five years, thereby greatly increasing the pediatrician's ability to provide comprehensive pediatric care to larger segments of the public.

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To implement this program, the Academy Executive Board, meeting in Evanston, approved the establishment of a Division of Child Health Manpower within the AAP Central Office.

The AAP Executive Board also unanimously endorsed as official Academy policy the position that a physician may delegate to a properly trained individual working under his supervision, the responsibility of providing appropriate portions of health examinations and health care for infants and children.

Specific objectives and responsibilities for the AAP Division of Child Health Manpower are now in the planning stage. However, responsibilities may include development of training guidelines, accreditation of educational institutions training such personnel, and certification of allied child health personnel.

The Academy will explore the possibility of meeting some of these obligations in cooperation with other national organizations including the American Nurses Association, the National League of Nursing, the American Medical Association, and the American Association of Junior Colleges.

The Academy has recommended development of the following classifications of child health personnel:

Pediatric Nurse Associate: A registered nurse who has completed a diploma nursing program, an associate degree nursing program, or is a graduate of a baccalaureate nursing program. This associate will also have completed a recognized pediatric nurse associate (practitioner) program of about nine months duration. A pediatric nurse associate's responsibilities may include activities that are directly related to patient care, i.e., obtaining medical and health histories; performing portions of the physical examination; giving information and counsel; and managing health problems. These tasks will be performed under the supervision of a physician.

Pediatric Office Assistant: A pediatric office assistant will, when possible, have completed at least two years of college or its equivalent, or be a graduate licensed visiting or licensed practical nurse. She will work under the supervision of a physician or a nurse associate. Her responsibilities may include activities that aid the physician or nurse associate in patient care, i.e., obtaining medical histories, performing screening procedures, and various administrative, clerical and minor technical functions, or other duties as the physician or nurse associate may direct.

Pediatric Aide: A pediatric aide when possible, will have completed at least high school or its equivalent. A pediatric aide will usually be trained

on the job by a pediatrician certified by the American Board of Pediatrics. She will work under the supervision of a physician, pediatric assistant, or pediatric nurse associate.

These classifications are subject to changes. The American Medical Association in cooperation with the medical specialty organizations including the AAP, is presently studying the classifications of allied health personnel to develop standardized terminology.

The initiation of an allied child health care manpower program by the Academy represents a direct reaction to expressed opinions voiced by an overwhelming majority of AAP members responding to a survey of office practices conducted during the past two years by the AAP Subcommittee on Pediatric Manpower.

The survey revealed that a large percentage of practicing pediatricians is performing patient care tasks which they feel can and should be delegated to other health personnel.

* * *

HOSPITALIZATION CONTINUES TO INCREASE IN 1969

Hospital utilization continued to increase in the first quarter of 1969, according to Hospital Indicators, a monthly report appearing in the June 16 issue of *Hospitals*, Journal of the American Hospital Association.

The report, based on a continuing survey of 650 community hospitals, shows a total of 7,087,462 admissions to the nation's short-term community hospitals in the first three months of 1969. That is a 2.1 per cent increase over the 6,941,114 admissions reported in the comparable period of 1968.

The number of persons 65 and over admitted to hospitals in 1969's first quarter was 1,498,949, or five per cent more than in 1968's first quarter. These older persons stayed in the hospital an average of 13.4 days, while persons under 65 had an average stay of 7 days.

Visits to hospital outpatient departments were still on the increase from January through March, with 27,887,844 such visits being recorded. The total is 5.1 per cent higher than the 26.5 million visits reported in 1968's first quarter.

Hospitals are experiencing increased expenses in providing care to both inpatients and outpatients. Their total expenses in the early months of 1969 were \$4,051,249,000, or 16.5 per cent more than in the first quarter of 1968.

According to Indicators, hospital expenses are continuing to increase, but not as rapidly as in recent years.

* * *

(Continued on Page 470)

Book Review

THE BALKAN NEPHROPATHY. Ciba Foundation Study Group No. 30. In Honour of Professor Dr. Frano Bulic. Edited by G. E. W. Wolstenholme and Julie Knight. Little, Brown and Company, Boston, 1967.

This is a very thin book compiled from a series of papers about one disease limited to the Balkan area and generally known as endemic nephropathy. Its epidemiology and possible etiology and pathological changes are discussed by various authorities.

As Dr. Clifford Wilson stated in his introductory review, the most fascinating and mysterious aspect of the disease is not its clinical or histological picture, but rather its epidemiology and the question of why it is restricted to the Balkan states. No clear answer to these problems is given. The text probably will not be of much interest to practicing physicians in Rhode Island or for that matter in the United States at large.

DANIEL S. F. LIANG, M.D.

ENDOCRINOLOGY OF THE TESTIS. Ciba Foundation Colloquia on Endocrinology Volume 16. Edited by G. E. W. Wolstenholme and Maeve O'Connor. Little, Brown and Company, Boston, 1967. \$12.50

This book of 311 pages comprises a series of excellent papers on the problems of hormonal function in the male testis written by the top men in their field representing several countries. The articles are well-edited. At the end of each one there is a panel discussion covering the material in it. The book covers a wide range of hormonal research on the testis from histochemistry to steroid hormone biosynthesis. Essays dealing with mixed testicular dysgenesis and testicular function in man, and the relationship between the structure of the testes and differentiation of the external genitalia and phenotypes in man are useful reading. The more technical papers may be less interesting to those who are clinically oriented than to those of academic leanings. This is a most valuable

TWO SENTENCE ESSAY

Kinsey observed that a man loitering on the street watching an unclothed woman through a window could be arrested as a "Peeping Tom." If the situation were reversed and a woman was observing an unclad man through the window, the man could be arrested as an "exhibitionist."

... Medical Aspects of Human Sexuality,
April 1969

symposium-type book useful for students and for researchers interested in the endocrinology of the testes.

DANIEL S. F. LIANG, M.D.

PROFESSIONAL LIABILITY

(Concluded from Page 462)

ical societies or hospital medical staffs from pre-trial discovery or production in court.

The bills providing for advance payments, separate trial on the statute of limitations, and providing for the confidentiality of medical review committee proceedings were enacted into law.

CONCLUSION

The Board of Trustees is fully aware of the seriousness of the problems associated with malpractice claims and has directed the staff at AMA headquarters to continue to treat these problems as items deserving priority consideration. The reaction of the House of Delegates with respect to the items covered in this report would provide a helpful guide to both the Board and the headquarters staff with respect to the direction in which their efforts would be most productive.

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Mr. Francis R. Dietz,

Executive Administrator,

The Memorial Hospital,

Pawtucket, Rhode Island 02860

Edalogy . .

(Ethnic Medicine)

OTITIS IN AMERICAN INDANS

American Indians suffer from permanent hearing impairment or deafness at a far greater rate than other Americans. Among Navahos, for example, the rate of middle ear disease is five times the national average, and among Eskimos the rate is 16 times higher than the national average. In one Eskimo village, Bethel, nearly 50 per cent of the children suffer from serious hearing loss as a result of middle ear disease.

... Medical Tribune, June 9, 1969

* * *

INGUINAL HERNIA IN CENTRAL AFRICANS

In a study of 1,283 patients of both sexes with 1,764 inguinal hernias, 57.3 per cent of all direct inguinal hernias were found in male patients and 65.6 per cent in female patients. Most hernias were surgically treated in patients between 30 and 45 years of age. There was a conspicuous absence of hernias during the first decade of life. Fifty-six per cent of all indirect hernias were of the scrotal type, involving the right side in 78 per cent of all patients.

There was evidence that 94.6 per cent of all male patients and 77.4 per cent of the female patients had pelvic changes predisposing to inguinal hernia. The increased frequency of inguinal hernia in Negro females is explained by increased development of inguinal hernias with persisting vaginal processus. The cause is the low symphysis in regard to the interspinous line, which is a racial characteristic in paleo-Negroid people.

... M. Kreyer: Munchen. Med. Wschr., 1968, 110:1750

* * *

DIABETES — SINGULAR OR PLEURAL

Diabetes as seen in the Navaho Indians and diabetes in the Pennsylvania Amish are two markedly different disorders. Diabetes may actually be a number of distinct genetic diseases.

There is tremendous variation in the clinical and biochemical features of diabetes in various ethnic groups. In an attempt to assess this ethnic variability, the clinical and metabolic characteristics of diabetes in two populations that are widely separated by customs, geography, and history have been studied. The Navahos and the Pennsylvania Amish were chosen because they represent genetically homogeneous populations. The Navahos live in small, isolated family groups scattered over

a reservation in northeastern Arizona. The Old Order Amish are a highly inbred religious sect who migrated to eastern Pennsylvania from Western Europe in the 18th century. Neither group mixes much with its neighbors. About the only thing the two groups have in common is the fact that their diets contain a high proportion of carbohydrates and fats and a low proportion of protein."

Among the Navahos, diabetes is a fairly common but extremely mild disorder. The juvenile form of the disease is unknown among the Navahos, and even mild ketosis is rare.

The Amish have the typical Western European form of diabetes. Death from juvenile diabetes is well known throughout their Pennsylvania community. And Amish diabetics show a high incidence of retinopathy, nephropathy, coronary artery and peripheral vascular disease.

The plasma insulin responses of Navahos to a standard oral glucose load was tested. The same tests were done among the Amish.

Comparing the two populations, it was found that in the Navaho controls the difference in plasma insulin response to oral glucose was three times greater than in the Pennsylvania controls. Dietary differences alone cannot account for this marked difference. It is likely that genetic factors are also involved.

... Rimoin, D. L., as reported Medical World News, March 21, 1969

ONE SENTENCE ESSAY

Everyone lampoons modern technological society, but no one is prepared to give up his refrigerator.

... John W. Gardner, former Secretary of HEW

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THROUGH THE MICROSCOPE

NEW IMAGE FOR SENIOR DRIVERS

A study by the University of Denver College of Law has found that both drivers over 65 and those who are disabled have better driving records than the general population.

In a comprehensive survey of 30 states and the District of Columbia, drivers 65 and over averaged 37 per cent fewer accidents than the total driving population. Although they represented 7.4 per cent of all drivers, they were involved in only 4.8 per cent of all the accidents.

According to Justice Sherman G. Finesilver, head of the study team, the senior driver is almost never guilty of such disastrous errors as speeding, drunk driving, and tailgating.

A project of the Harvard School of Public Health showed that in Massachusetts a sample of disabled drivers was involved in about half the number of accidents and violations charged against a control group of nondisabled drivers. At New York University, the Center for Safety Education and the Institute of Rehabilitation Medicine have been providing special driving instruction for disabled persons for a number of years. There are about 50 participants in the program each year, and a trainee hasn't failed the New York State road test since April 1964. Although severely disabled from such conditions as paraplegia, quadriplegia, and hemiplegia, 90 per cent passed the road test on the first try.

("Accidental Intelligence," in *Medical World News*, March 28, 1969)

* * *

HOSPITAL CARE OF ALCOHOLICS TO BE STUDIED

The American Hospital Association has been awarded a grant of \$87,235 by the National Institute of Mental Health to finance the first year of a two-year educational project aimed at improving the hospital care of alcoholic patients.

Edwin L. Crosby, M.D., executive vice president and director of AHA, said a series of three invitational conferences will be scheduled in different areas of the country in the first year of the project.

Dr. Crosby pointed out that hospitals can expect to become more involved in the problems of alcoholism, in light of the general agreement of the medical profession that alcoholism is an illness. In addition, an increasing number of states are enacting statutes requiring that alcoholics be treated as person with an illness, and not punished as law violators.

Conferences scheduled over the next year will be directed toward hospital administrators, trustees, physicians, nurses, social workers, chaplains and

areawide health planning officials. The program format will include lectures, written guidelines and general and group discussion.

* * *

GRANTS FOR CARDIOVASCULAR RESEARCH AVAILABLE

Grants-in-aid are available for Cardiovascular Research from the Rhode Island Heart Association. The deadline for protocols is December 31, 1969 for the fiscal year July 1, 1970 through June 30, 1971.

Preference is given to deserving but less established investigators. The Heart Association announced that the average grant is \$5,000. Application forms can be obtained from the Rhode Island Heart Association, 333 Grotto Avenue, Providence, Rhode Island 02906, or further information can be obtained by telephoning 274-8150.

* * *

NEW TDI MATERNITY REPORT WARRANTS MD ATTENTION

Item 6 of a new form for maternity benefits covered under the pregnancy provision of the Temporary Disability Insurance Act should be filled in by the attending physician only after childbirth has occurred, the Temporary Disability Insurance Division of the Department of Employment Security said recently. The new form, TDI-2, was devised after the pregnancy provision of the TDI Act was amended. Under the new provision a lump sum payment of \$250 is payable to eligible individuals upon submitting proof of the delivery of a child. Attending physicians are requested to complete item 6 only after childbirth has occurred, not the expected date of childbirth.

* * *

PHARMACEUTICAL PRESCRIPTIONS MUST BE SPECIFIC

The Rhode Island Pharmaceutical Association has notified all its membership that the Rhode Island Department of Social Welfare is returning to pharmacies all prescriptions received by that Department which do not specify directions for use; i.e., those prescriptions which state "As Directed" requiring that the pharmacies involved secure from the physicians the specific directions for use before said prescriptions will be honored for payment. Pharmacists are warned not to fill prescriptions which indicate as directions for use the language "as directed."

As a reminder, pharmacists are advised that the white plastic identification card does not certify eligibility, and to accept as eligible the cardboard check stub only.

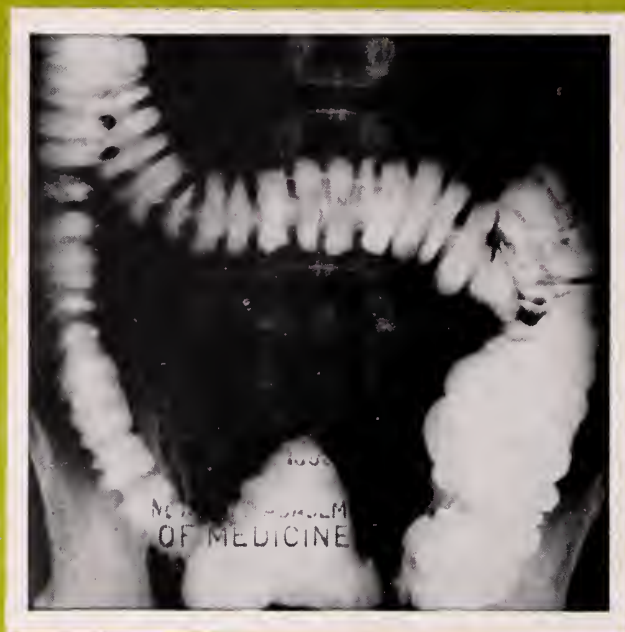


Maybe you've heard this question on radio or television ... or seen it in a Blue Cross & Blue Shield newspaper ad. We hope you'll start hearing it from your hospitalized patients too. It should be a welcome change from the usual question, "Why can't I stay a few more days?"

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I
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Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation

or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



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rhode island medical journal





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Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence.

As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported.

Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others.

Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported.

Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia.

A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: **TEPANIL Ten-tab** tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); **TEPANIL**: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in mid-evening to overcome night hunger. Use in children under 12 years of age is not recommended.

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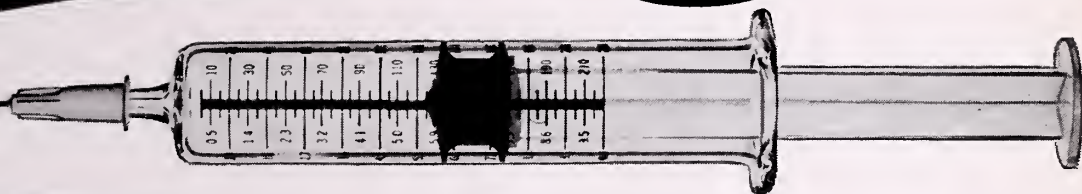
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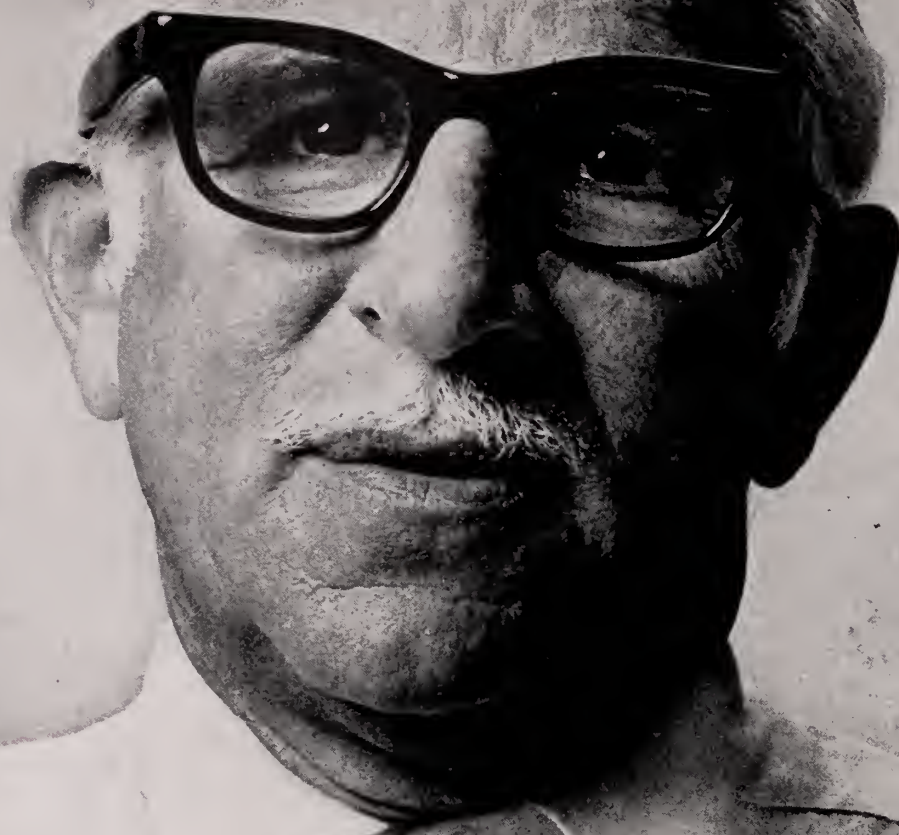
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Effectiveness: Because its antibacterial component is DECLOMYCIN Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, Nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—*anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani.* Skin—*maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare).* Kidney—*rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare).* Hypersensitivity reactions—*urticaria, angioneurotic edema, anaphylaxis.* Teeth—*dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy.* Demethylchlortetracycline may form a stable calcium complex in bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, food, and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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The RHODE ISLAND MEDICAL JOURNAL

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MEDICAL EDUCATION — AN INTERNATIONAL PICTURE

PATRICK S. BYRNE, O.B.E., M.B., CH.B., F.R.C.G.P. 495

THYROID CRISIS IN A COUNTY HOSPITAL

. . . *Thyroid Crisis Incidence Higher Where Socio-Economic Factors
Engender Inadequate Medical Care* . . .

K. KUSHALA HEDGE, M.B.B.S. 500

EMERGENCY MEDICAL SERVICES IN RHODE ISLAND

. . . *Yearly Surveys Show Substantial Progress in Organization* . . .

JOSEPH S. KARAS, M.D. 505

WHAT'S NEW IN VENEREAL DISEASE?

. . . *We Must Search and Destroy the Enemy While Seeking A Better
Weapons System* . . .

VERNAL G. CAVE, M.D. 519

HERNIATED CERVICAL AND LUMBAR DISCS: CLINICAL FINDINGS AND DIAGNOSTIC PROCEDURES

. . . *Surgery, If Unavoidable, Must Be Directed by Symptoms and
Neurologic Deficit* . . .

WILLIAM E. HUNT, M.D. and STEPHEN PAUL 523

THE MEDICAL PROFESSION AND PEER REVIEW

. . . *Report of the Council on Medical Service of the American Medical
Association as adopted by the House of Delegates at the AMA
Annual Session in New York, July, 1969* 490

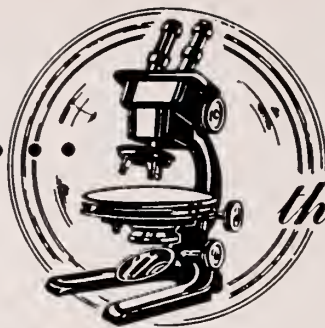
EDITORIALS

Education For General Practice.....	513
Proofreader's Prostatitis	513
Hepatitis Precautions	514
Socialized Medicine Italian Style.....	514
Viet Nam Volunteers.....	515
AMCAS	515
New Medicaid Regulation.....	516
Chiropractors and X-Ray Exposure.....	516
Acute Obstructive Suppurative Cholangitis.....	517

DEPARTMENTS

Through the Microscope.....	474
Roentgen Riddle	483

THROUGH .



the Microscope

R.I. BLUE SHIELD EXECUTIVE NAMED TO HEW TASK FORCE

Arthur F. Hanley, executive director of Rhode Island Blue Cross and Blue Shield, has been appointed to an important federal Task Force that will evaluate Medicaid and related health-care financing programs.

Mr. Hanley is the sole representative of the nation's Blue Cross and Blue Shield plans to be named to the study panel by Robert H. Finch, Secretary of Health, Education and Welfare. However, Walter J. McNerney, president of the national Blue Cross Association, has been named chairman of the group.

One major responsibility of the Task Force, which includes leaders in the fields of medical care, public assistance, business and education, will be to "investigate rising costs, fraud, and other problems in Medicaid," Mr. Finch said.

Initially, the group will focus its efforts on program management, effectiveness of use, and eligibility. Its first meeting was held in Washington on Friday, July 25.

Medicaid is a program that provides health-care services to the medically indigent through joint financing by the state and federal government.

In Rhode Island, it is known as the Medical Assistance Program and is administered by the state Department of Social Welfare.

Mr. Hanley has been associated with Rhode Island Blue Cross for 30 years, and since 1962 has headed the Plans, which now serve 85 per cent of the State's population.

GROWING RESISTANCE AMONG INDEPENDENT RETAILERS TO CREDIT CARDS

Acceptance of credit cards by independent retailers jumped nationally 2 per cent in June, but the average percentage of business transacted on them dropped 1 per cent.

This is the finding of the continuous field survey of the National Federation of Independent Business which asks not only if retail respondents honor bank credit cards, but also how much of their volume is done on them.

The latest data from the computers finds on a national basis 34 per cent accept the cards, up from 32 per cent, but the average percentage of business done on them has dropped down to 18 per cent from a previous 19 per cent.

In addition, volunteer additional comments indicate that there is a growing resistance among independent retailers to the spread of bank credit cards on a regional basis.

This is emanating largely from the New England and Middle West states where the retailers are not in so much direct competition with the big corporate chains who offer their own revolving credit plans.

Typical of the comments received by Federation researchers is one from a medium-sized retailer in a small upper Ohio city who says:

"At present we have no credit card arrangement locally but some will soon be forced down our throat. In talking with local bankers they express a very definite 'anti-bank credit card sentiment' but feel compelled to join in such arrangements to blunt the invasion from the large metropolitan banking interests.

HALF MILLION MEDICARE CLAIMS IN R.I. IN THREE YEARS

More than \$80 million in Medicare benefits has been paid through Rhode Island Blue Cross and Blue Shield since the federally-funded health care program began three years ago.

By July 1, the third anniversary date of the program, more than half a million claims had been processed by the Blue Plans, which were designated to administer the program in Rhode Island.

Slightly more than 100,000 Rhode Islanders are enrolled in the Medicare program, which paid out about \$16 million in its first full year of operation.

By contrast, in the first six months of this year, more than \$21 million has already been paid out in various health care benefits.

Here's how the money was spent: \$62,198,332 for hospital and related services; \$17,827,808 for doctors' services.

(Continued on Page 475)



*heavenly relief
for unearthly cough*

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*Benadryl[®] (diphenhydramine
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12 grains ammonium chloride;

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menthol; and 5% alcohol.

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soothes irritated throat membranes.

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PRECAUTIONS: Persons who

have become drowsy on this or

other antihistamine-containing

drugs, or whose tolerance is not

known, should not drive vehicles

or engage in other activities re-

quiring keen response while using

this preparation. Hypnotics, seda-

tives, or tranquilizers if used with

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should be prescribed with caution

because of possible additive effect.

Diphenhydramine has an atro-

pine-like action which should be

considered when prescribing

BENYLIN EXPECTORANT.

ADVERSE REACTIONS: Side

reactions may affect the nervous,

gastrointestinal, and cardiovascu-

lar systems. Drowsiness, dizziness,

dryness of the mouth, nausea, ner-

vousness, palpitation, and blurring

of vision have been reported. Al-

lergic reactions may occur.

PACKAGING: Bottles of 4 oz.,

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Before prescribing or administering, see Sandoz literature for full product information, including adverse reactions reported with phenothiazines. The following is a brief precautionary statement.

Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree.

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.



THROUGH THE MICROSCOPE

(Continued from Page 474)

The administrative workload, which has mushroomed during the three-year period, has been offset to a large extent by the use of Blue Cross and Blue Shield computer services. All administrative cost and claim payments are reimbursed by the government.

Nearly 70,000 inpatient hospital bills were processed, and another 2,600 bills for treatment in extended care facilities also were handled.

More than 477,000 doctors' bills were processed, although doctor bills accounted for less than one-quarter of the total claims expense.

Arthur F. Hanley, executive director of the Blue Cross and Blue Shield Plans, attributed the growth and success of the health care program to the spirit of cooperation that existed among doctors, hospitals, and patients during the early phase of the operation. "Fortunately, that spirit has continued to grow with the program," Mr. Hanley said.

NOW and THEN

- As 1969 began, approximately 168 million persons in the United States were protected by some form of private health insurance. Ten years earlier only 121 million were insured.

- Insurance companies paid a record of \$6.7 billion in health insurance benefits during 1968. Ten years earlier the record was \$2.6 billion.

- There are over 1,000 insurance companies writing health insurance in the United States today. Ten years ago the total was over 600.

- The average cost per patient-day in a U.S. general hospital had risen to \$65 at the start of this year. In 1959, that cost was averaging \$30 per day.

- The American public's total health insurance benefits in 1968 were estimated at \$12 billion. Ten years earlier the nation had received \$4.7 billion.

—Health Insurance Institute

CAN COMPUTERS HELP EXISTING SCHOOLS OF MEDICINE TO GRADUATE MORE PHYSICIANS?

A research project, funded by the Division of Physician Manpower, National Institutes of Health, is designed to develop and put into effect a self-instructional program utilizing computers that will allow the student in the Ohio State University College of Medicine to study at his best pace through a major part of the curriculum.

Under the direction of three medical educators and a systems analyst at the College of Medicine, the study will test the theory that independent study can improve the efficiency of medical education. Findings of the experiment such as newly developed teaching concepts, techniques and ma-

terials will be released for use by other medical schools.

A key aim of the project is to overcome a major weakness of the present "lockstep" method of instruction which compels each student to advance at the same pace. All students do not arrive at medical school with the same degree of preparation for the various medical subjects. Moreover, they vary as to their intellectual capability, interest, study habits, personalities, and backgrounds.

The major advantage of the self-instructional project is that it recognizes these differences among students and attempts to tailor the teaching schedule to the individual rather than fit all students to a common program.

Because this demonstration may help to minimize student "drop-outs," the study has significant implications for this country's supply of future physicians.

Principal investigators at the Ohio State University College of Medicine for the study will be Lloyd R. Evans, M.D., assistant dean and professor of medicine; Ralph W. Ingersoll, Ph.D., director of research and services in medical education; Robert Folk, M.D., assistant professor of Medicine, and James V. Griesen, M.B.A., systems analyst.

Award of the grant which totals \$1,400,000 over a three-year period was announced by Dr. Leonard D. Fenninger, director, Bureau of Health Professions Education and Manpower Training.

SHELTER CARE FOR RHODE ISLAND CHILDREN TRANSFERRED

On July 1, 1969, Rhode Island Child Welfare Services, a major unit of Community Services within the Social Welfare Department, assumed total responsibility for Emergency Shelter Care of children deprived of their chief caretaker, due to unforeseen family crisis, according to John J. Affleck, assistant director of community services.

"A child may need Emergency Shelter for a few days, a few weeks or a few months," said Mr. Affleck, "until the crisis which created the need is resolved or until other suitable foster care arrangements can be made. This is a new and specialized function of child care, which our tax-supported children's agency is assuming."

Although presently organized to take care of children outside their own homes, Mr. Affleck pointed out that the ultimate aim of Child Welfare Services is to take care of as many children as possible in their own homes, as soon as personnel and funds will allow.

The transfer of Shelter Care Service from Children's Friend and Service to Rhode Island Child

(Continued on Page 484)

Symbols in a life of
psychic tension

M.A.

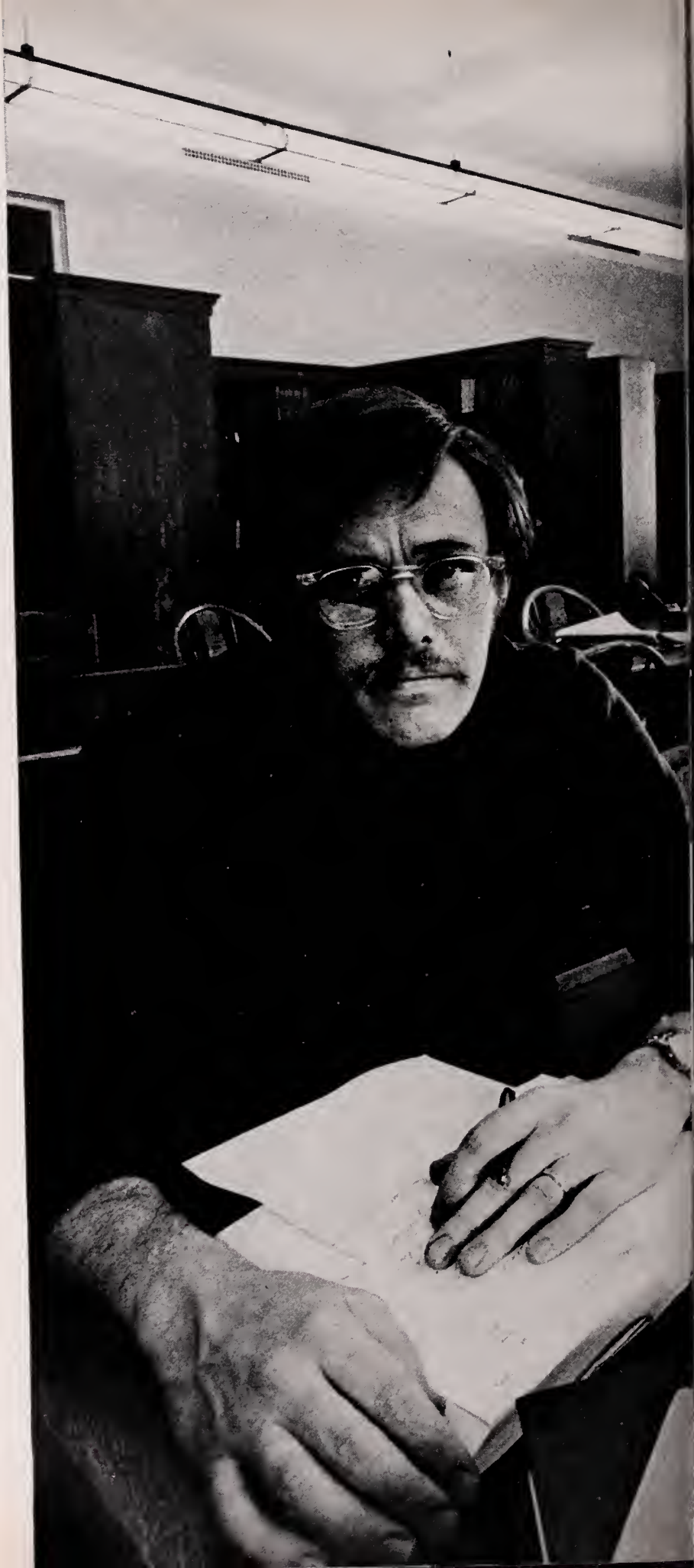
class of '66

Ph.D.

thesis...in progress

G.I.

series and complete
examination normal
(persistent indigestion)



Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



Rx

Valium® (diazepam) *t.i.d.* and *h.s.*

M. A. (class of '66)... Ph.D. (thesis, in progress)... letters that represent a young lifetime of work... a formal education nearing completion. But there are still long, arduous examinations to pass, a doctoral thesis to finish... a period in which stress is often converted into the gastrointestinal symptoms of psychic tension. For this kind of patient—with no demonstrable pathology—consider the usefulness of Valium (diazepam).

Valium can help relieve psychic tension and resultant somatic symptoms, within the first day for some patients. Valium is also useful in psychic tension with associated depressive symptoms. And Valium can help relieve psychic tension-induced insomnia with an *h.s.* dose added to the *t.i.d.* schedule.

Valium is generally well tolerated. In proper maintenance dosage it seldom dulls the senses or interferes with functioning. Side effects most commonly reported have been drowsiness, fatigue and ataxia.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets
to help relieve psychic tension
and its somatic symptoms

The AMBAR®
SCRAPBOOK
of

Obesity Oddities

FACT & LEGEND

OBESITY WAS A MILITARY OFFENSE!

OVERWEIGHT ROMAN HORSEMEN WERE MADE TO FORFEIT THEIR MOUNTS AND BECOME FOOT SOLDIERS!



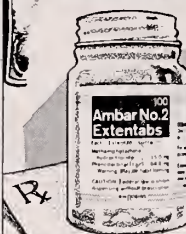
RECORDED ON AN ENGLISHMAN'S
TOMBSTONE

JAMES PARSON
DIED 1743
HE HAD OFTEN EATEN A WHOLE
SHOULDER OF MUTTON AND A
PECK OF HASTY PUDDING

SHAKESPEARE

WAS AWARE OF THE
DANGERS OF OBESITY
HE WROTE...

*Make less thy body hence
and more thy grace,
leave gormandizing;
Know thy grave doth
gape for thee wider
than for other men.*



THE
COST OF
**AMBAR
EXTENTABS**

IS APPROXIMATELY ONE
HALF THAT OF OTHER LEAD-
ING APPETITE SUPPRESSANTS

AN IMPORTANT FACTOR
IN LONG TERM THERAPY



CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety... helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting. Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

AMBAR #2 EXTENTABS®

methamphetamine HCl 15 mg.,
phenobarbital 64.8 mg. (1 gr.)
(Warning: may be habit forming).

BRIEF SUMMARY/Indications: Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced

renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

A. H. ROBINS COMPANY, RICHMOND, VA. 23220

A-H ROBINS

Dulcolax®...so predictable you can almost set patients by it.

Dulcolax works so effectively that the time of bowel evacuation can often be predicted.

Dulcolax tablets taken at night will usually result in a convenient bowel movement the following morning. Dulcolax suppositories generally work within 15 minutes to an hour.

Dulcolax may be given to the aged, pregnant or nursing women, and children. It may be particularly helpful in conditions in which straining should be avoided. The drug, however, is contraindicated in the acute surgical abdomen.

Dulcolax® bisacodyl



when it's late in life
and anxiety
and depression
coexist...

initial therapy

Triavil[®] 4-10

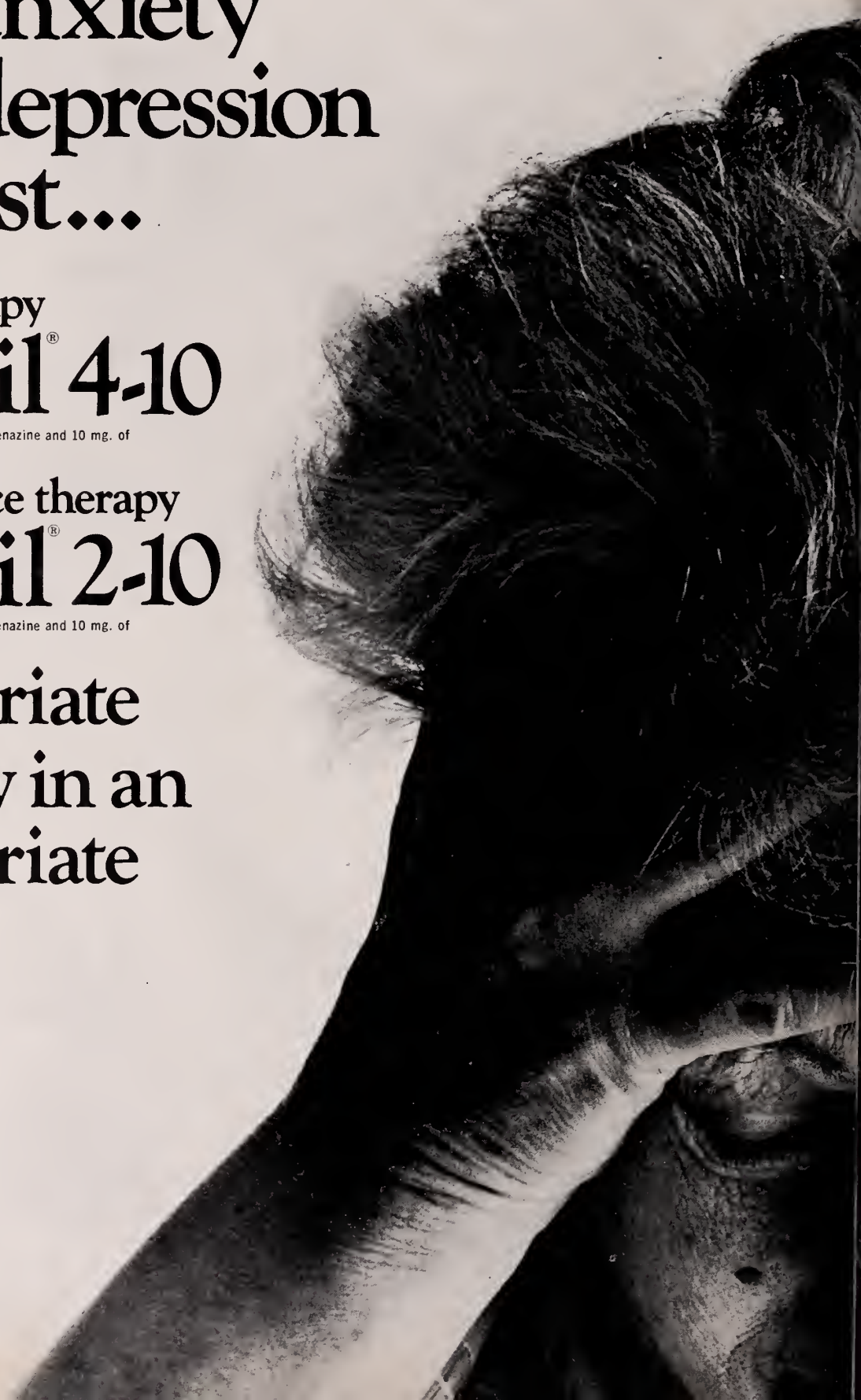
Each tablet contains 4 mg. of perphenazine and 10 mg. of amitriptyline hydrochloride

maintenance therapy

Triavil[®] 2-10

Each tablet contains 2 mg. of perphenazine and 10 mg. of amitriptyline hydrochloride.

appropriate
therapy in an
appropriate
dosage





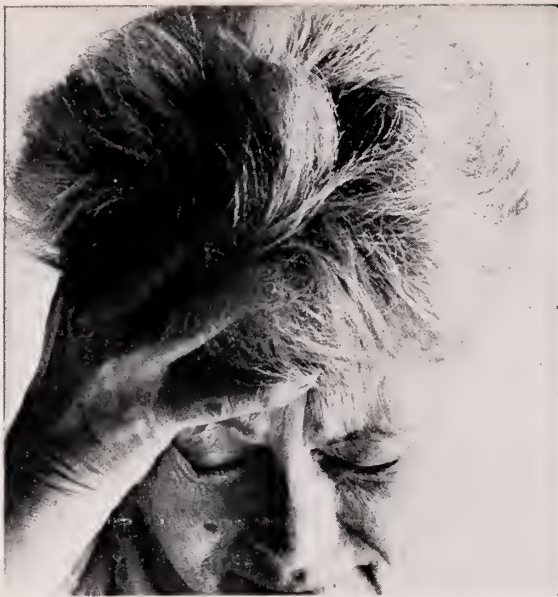
During the years of declining strength and increasing infirmity, many patients are more sensitive to both the desired response and the unwanted effects of some drugs. That's when low-dosage therapy is needed. And that's when TRIAVIL 4-10, as initial therapy, and TRIAVIL 2-10, for maintenance, can prove particularly useful.

Starting with TRIAVIL 4-10 should help minimize possible dose-related side effects in the geriatric patient with coexisting anxiety and depression. And, subsequently, TRIAVIL 2-10 can increase flexibility in adjusting maintenance dosage.

Activities made hazardous by diminished alertness should be avoided. You will want to inform your patients that the effects of alcohol may be potentiated. Because of the potentiation of other drug effects possible with MAOI inhibitors, such agents should not be given concomitantly with TRIAVIL. However, therapy with TRIAVIL can be initiated cautiously two weeks or more after withdrawal of the MAOI drugs. And, until significant remission is observed, close supervision of any seriously depressed patient is, of course, essential to guard against possible suicide. The drug is contraindicated in glaucoma, in patients expected to experience problems of urinary retention, in drug-induced CNS depression, and in bone marrow depression. TRIAVIL 4-10 & 2-10—tranquilizer-antidepressant therapy especially appropriate for the elderly patient so often intolerant to medication in high dosages.

TRIAVIL[®] for moderate to severe anxiety
containing perphenazine and amitriptyline HCl with coexisting depression
TRANQUILIZER-ANTIDEPRESSANT

For additional prescribing information, please see following page.



TRIAVIL[®]

TRANQUILIZER-ANTIDEPRESSANT

TRIAVIL 4-10: Each tablet contains 4 mg. of perphenazine and 10 mg. of amitriptyline hydrochloride.

TRIAVIL 2-25: Each tablet contains 2 mg. of perphenazine and 25 mg. of amitriptyline hydrochloride.

TRIAVIL 4-25: Each tablet contains 4 mg. of perphenazine and 25 mg. of amitriptyline hydrochloride.

TRIAVIL 2-10: For use in adjusting maintenance dosage: Each tablet contains 2 mg. of perphenazine and 10 mg. of amitriptyline hydrochloride.

for moderate to severe anxiety with coexisting depression

INDICATIONS: Patients with moderate to severe anxiety and/or agitation and depressed mood; patients with depression in whom anxiety and/or agitation are severe; patients with depression and anxiety in association with chronic physical disease; schizophrenics with associated depressive symptoms.

CONTRAINDICATIONS: Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); bone marrow depression; urinary retention; pregnancy; glaucoma. Do not give in combination with MAOI drugs because of possible potentiation that may even cause death. Allow at least 2 weeks between therapies. In such patients therapy with TRIAVIL should be initiated cautiously, with gradual increase in the dosage required to obtain a satisfactory response.

WARNINGS: Patients should be warned against driving a car or operating machinery or apparatus requiring alert attention, and that response to alcohol may be potentiated.

PRECAUTIONS: Suicide is always a possibility in mental depression and may remain until significant remission occurs. Supervise patients closely in case they may require hospitalization or concomitant electroshock therapy. Untoward reactions have been reported after the combined use of antidepressant agents having various modes of activity. Accordingly, consider possibility of potentiation in combined use of antidepressants. Not recommended for use in children. Mania or hypomania may be precipitated in manic-depressives (perphenazine in TRIAVIL seems to reduce likelihood of this effect). If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Caution patients about errors of judgment due to change in mood.

SIDE EFFECTS: Similar to those reported with either constituent alone. **Perphenazine:** Should not be used indiscriminately. Use caution in patients with history of convulsive disorders or severe reactions to other phenothiazines. Likelihood of untoward actions greater with high doses. Closely supervise with any dosage. Side effects may be any of those reported with phenothiazine drugs: blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); liver damage (jaundice, biliary stasis); extrapyramidal symptoms (opisthotonos, oculogyric crisis, hyperreflexia, dystonia, akathisia, dyskinesia, parkinsonism) usually controlled by the concomitant use of effective antiparkinsonian drugs and/

or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine; severe, acute hypotension (of particular concern in patients with mitral insufficiency or pheochromocytoma); skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angio-neurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; endocrine disturbances (lactation, galactorrhea, disturbances of menstrual cycle); grand mal convulsions; cerebral edema; altered cerebrospinal fluid proteins; polyphagia; paradoxical excitement; photophobia; skin pigmentation; failure of ejaculation; EKG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions such as dryness of the mouth, headache, nausea, vomiting, constipation, obstipation, urinary frequency, blurred vision, nasal congestion, and a change in the pulse rate; hypnotic effects; pigmentary retinopathy; corneal and lenticular pigmentation; occasional lassitude; muscle weakness; mild insomnia; significant unexplained rise in body temperature may suggest intolerance to perphenazine, in which case discontinue. Antiemetic effect may obscure signs of toxicity due to overdosage of other drugs or make diagnosis of other disorders such as brain tumors or intestinal obstruction difficult. May potentiate central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol), atropine, heat, and phosphorous insecticides. **Amitriptyline:** Careful observation of all patients recommended. Side effects include drowsiness (may occur within the first few days of therapy); dizziness; nausea; excitement; hypotension; fainting; fine tremor; jitteriness; weakness; headache; heartburn; anorexia; increased perspiration; incoordination; allergic-type reactions manifested by skin rash, swelling of face and tongue, itching; numbness and tingling of limbs, including peripheral neuropathy; activation of latent schizophrenia (however, the perphenazine content may prevent this reaction in some cases); epileptiform seizures in chronic schizophrenics; temporary confusion, disturbed concentration, or transient visual hallucinations on high doses; evidence of anticholinergic activity, such as tachycardia, dryness of mouth, blurring of vision, urinary retention, constipation, paralytic ileus; agranulocytosis; jaundice. The antidepressant activity may be evident within 3 or 4 days or may take as long as 30 days to develop adequately, and lack of response sometimes occurs. Response to medication will vary according to severity as well as type of depression present. Elderly patients and adolescents can often be managed on lower dosage levels.

Before prescribing or administering, read product circular with package or available on request.



MERCK SHARP & DOHME

Division of Merck & Co. Inc. West Point Pa 19486

where today's therapy is tomorrow's therapy

One of these disposables comes prefilled.
Its unit dose – in nonreactive glass
cartridge – is premeasured.

The cartridge is clearly labeled:
drug name, strength, control number.
Even expiration date where appropriate.

You're more confident that the patient gets...





...just what the doctor ordered with the Tubex Closed Injection System.

Injections with the Tubex system are as easy as 1, 2, 3,

- 1. Select**—from an extensive variety of prefilled Tubex sterile cartridge-needle units.* No multi-dose vials to bother with; no unlabeled syringes to cause confusion.
- 2. Inject**—with a minimum of pain. Thanks to the single-use, stainless-steel needle that's both ultra-sharpened and siliconized. Aspirate simply and conveniently.
- 3. Throw away**—empty cartridge-needle unit. Never used again, it can't transmit infection. And there's no clean-up job.

*For injectables not yet in the ever-expanding prefilled Tubex line, empty sterile cartridge-needle units are available.

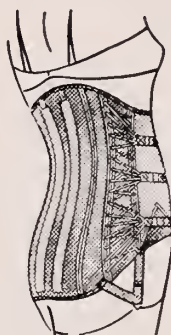
TUBEX®

Closed Injection System
Hypodermic Syringe
Sterile Cartridge-Needle Unit



Wyeth Laboratories Philadelphia, Pa.

RELIEVE



**BACK
PROBLEMS**

Freeman
**SUPPORT for
WOMEN
Model 423**

Get relief from postural strain and many back conditions with a high degree of comfort. Three sets of adjustment straps permit "form-fit" control to suit individual needs. Elastic insets allow free movement for the wearer. "Cushioned for Comfort," this fine Freeman garment features downy soft Dacron-Pima Cotton. Easy to wash and dry. Cushioned stays.

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**COMPLETE LINE OF ORTHOPEDIC
APPLIANCES — SURGICAL SUPPORTS
HOME TRACTION
WALKERS — CRUTCHES — CANES**

Certified Male and Female Fitters

♦ ♦ ♦

House Calls Upon Request

♦ ♦ ♦

Ernest Hill — Certified Orthotist

James P. Casperson — Orthotist

THROUGH THE MICROSCOPE

(Continued from Page 475)

Welfare Services was agreed upon following a task force report of July, 1967 from seven professionals in the field of child care appointed by the Director of Rhode Island Department of Administration, the Director of the Rhode Island Department of Social Welfare, the Executive Director of Rhode Island Community Services, Inc., and the President of Children's Friend and Service.

This report recommended that the two major shelter care agencies, Children's Home of Newport and Children's Friend and Service shift from shelter care to the public child welfare agency as soon as feasible.

Rhode Island Child Welfare Services took over shelter care in Newport County from Children's Home of Newport on January 1, 1969 and will assume responsibility for shelter care throughout the state on July 1, 1969.

Lakeside Home, which has been a shelter home for Children's Friend and Service, will when emptied of children presently being sheltered, be refurbished and used for emotionally disturbed children between the ages of 6 and 13.

Requests for service may come from anyone in the community. Requests for service in Newport County should be made to the area office, Elm Street, Newport, Rhode Island, 846-7102 and in the rest of the state to Rhode Island Child Welfare Services, 610 Mount Pleasant Avenue, Providence, 831-6700. Recruitment of agency staff and additional foster homes suitable for temporary placement throughout the state is currently underway.

EXERCISE VALUABLE ASSET TO OLDER FOLKS' HEALTH

Will exercise help the older person?

Will it harm him?

According to a recent study conducted by a gerontology institute in Oslo, Norway, it can do considerable good.

It will, for instance, increase blood volume, reduce heart rate, and improve the heart's pumping capacity.

The exercise program was tested by senior citizens, aged 70 to 81 who walked on a treadmill and rode a bicycle, among other things.

The entire program lasted six weeks.

At the conclusion, the investigators said the exercise had proved to be in no way injurious to health. Rather, it brought about a feeling of well-being and mental relaxation.

The investigators also noted that walking seemed better for the elderly participants than bicycling,

(Continued on Page 486)



Benadryl[®]

(diphenhydramine hydrochloride)

PARKE-DAVIS

Parke, Davis & Company, Detroit, Michigan 48232
56569

now he can cope...

thanks to

Butisol SODIUM[®] (SODIUM BUTABARBITAL)

the "daytime sedative" for everyday situational stress

When stress is situational—environmental pressure, worry over illness—the treatment often calls for an anxiety-allaying agent which has a prompt and predictable calming action and is remarkably well tolerated. BUTISOL SODIUM (sodium butabarbital) meets this therapeutic need.

After 30 years of clinical use . . . still a first choice among many physicians for dependability, safety and economy in mild to moderate anxiety.

Contraindications: Porphyria or sensitivity to barbiturates.

Precautions: Exercise caution in moderate to severe hepatic disease. Elderly or debilitated patients may react with marked excitement or depression.

Adverse Reactions: Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and systemic disturbances are seldom seen.

Warning: May be habit forming.

Usual Adult Dosage: As a daytime sedative, 15 mg. ($\frac{1}{4}$ gr.) to 30 mg. ($\frac{1}{2}$ gr.) t.i.d. or q.i.d.

Available for daytime sedation: Tablets, 15 mg. ($\frac{1}{4}$ gr.), 30 mg. ($\frac{1}{2}$ gr.); Elixir, 30 mg. per 5 cc. (alcohol 7%).

BUTICAPS[®] [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg. ($\frac{1}{4}$ gr.), 30 mg. ($\frac{1}{2}$ gr.).

McNEIL

McNeil Laboratories, Inc., Fort Washington, Pa.



**"coughing
is not a harmless
privilege"**

—Current Therapy 1967, ed. by Conn, H. F., P. 88—

**if cough
serves no useful
purpose**

Rx Tussionex®

(Resin complexes of Hydrocodone and Phenyltoloxamine)

**... it works
(usually
for 10 to 12
hours*)**

TUSSIONEX SUSPENSION/TABLETS: Each teaspoonful (5 cc.) or tablet of TUSSIONEX contains 5 mg. hydrocodone (Warning: May be habit-forming) and 10 mg. phenyltoloxamine, both as cation exchange resin complexes of sulfonated polystyrene.

Class B narcotic — oral Rx where state laws permit.

INDICATIONS: Coughs associated with respiratory infections including chronic sinusitis, colds, influenza, bronchitis, and cough resulting from measles, pulmonary tuberculosis, bronchiectasis, and bronchogenic carcinoma.

***DOSAGE:** *Adults:* 1 teaspoonful (5 cc.) or tablet every 8-12 hours.
Children: Under 1 year: 1/4 teaspoonful every 12 hours.
From 1-5 years: 1/2 teaspoonful every 12 hours. Over 5 years: 1 teaspoonful every 12 hours.

SIDE EFFECTS: May include mild constipation, nausea, facial pruritus, or drowsiness.

For complete detailed information, refer to package insert or official brochure.

Strassenburgh

Strassenburgh Laboratories Division
Wallace & Tiernan Inc., Rochester, N. Y. 14623



No place for beginners

Terramycin[®] (oxytetracycline)

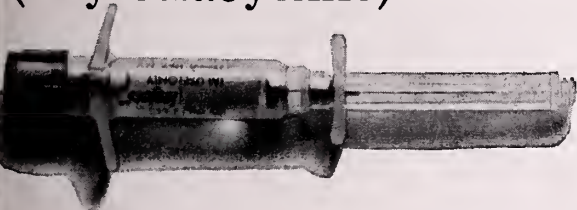
Fire victim. Examination reveals second degree burn of lower leg. To combat shock, restore circulatory volume and replace protein loss, plasma is administered. Local pressure dressing applied. Limb elevated to limit the flow of lymph. About 36 hours after admission the patient develops an elevated temperature and complains of pain at the site of the lesion.

Dressing removed. A suppurating slough area has developed over part of the burn. A swab specimen is taken for culture and the slough area is debrided. Antibacterial treatment is begun with Terramycin I.M. Days later, recovery is progressing, and the laboratory report shows a mixed infection with a predominance of susceptible coliform bacteria, confirming the therapeutic choice. Terramycin therapy is continued until all signs of infection disappear.

Experience has shown that Terramycin offers special advantages in treating bacterial infections complicating burns, when strains of causative organisms are susceptible. Broad-spectrum antibacterial coverage. Activity unaffected by penicillinase. Rapidly achieved therapeutic blood levels. Proven tissue toleration.

Terramycin I.M. is the only preconstituted broad-spectrum antibiotic designed specifically for intramuscular use. Requires no refrigeration. Remains stable for at least two years. Available for immediate use in Isoject,[®] a disposable injection unit. In difficult as well as routine cases, when tests reveal susceptible organisms, consider Terramycin. One of the world's most widely used broad-spectrums.

Terramycin[®] I.M. (oxytetracycline)



Pfizer LABORATORIES DIVISION
New York, N. Y. 10017

Contraindicated: In individuals hypersensitive to any of the components of this drug.

Warnings: If renal impairment exists, even usual doses may lead to excessive systemic accumulation and possible liver toxicity. In such patients, lower than usual doses are indicated and for prolonged therapy oxytetracycline serum level determinations may be advisable.

Terramycin may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Use of oxytetracycline during the last trimester of pregnancy, neonatal period and early childhood may cause discoloration of teeth. This effect occurs mostly during long-term use of the drug, but it has also been observed in usual short-treatment courses.

During treatment with tetracyclines, individuals susceptible to photodynamic reactions should avoid direct sunlight. Discontinue therapy at first evidence of skin discomfort.

Note: With oxytetracycline, phototoxicity is not believed to occur and photoallergy is very rare.

Precautions: Use of broad-spectrum antibiotics occasionally may result in overgrowth of nonsusceptible organisms. Where such infections occur, discontinue oxytetracycline and institute specific therapy.

As with all intramuscular preparations, Terramycin Intramuscular Solution should be injected well within the body of a relatively large muscle. **Adults:** The preferred sites are the upper outer quadrant of the buttock (i.e., gluteus maximus), or the mid-lateral thigh.

Children: It is recommended that intramuscular injections be given preferably in the mid-lateral muscles of the thigh. In infants and small children the periphery of the upper outer quadrant of the gluteal region should be used only when necessary, such as in burn patients, in order to minimize the possibility of damage to the sciatic nerve.

The deltoid area should be used only if well developed such as in certain adults and older children, and then only with caution to avoid radial nerve injury. Intramuscular injections should not be made into the lower and mid-thirds of the upper arm. As with all intramuscular injections, aspiration is necessary to help avoid inadvertent injection into a blood vessel.

Increased intracranial pressure with bulging fontanelles has been observed occasionally in infants receiving therapeutic doses of the drug, but such signs and symptoms have disappeared rapidly on cessation of treatment with no sequelae.

Adverse Reactions: Subcutaneous and fat-layer injection may produce mild pain and induration which may be relieved by an ice pack. Very mild gastrointestinal disturbances, not requiring discontinuance of the drug, may occur occasionally. Allergic reactions, including anaphylaxis, rarely have been observed.

Dosage: **Adult:** The optimal dosage varies, depending on the type and severity of infection. Unless otherwise specified, a dose of 100 mg. every 8 to 12 hours, or a single daily dose of 250 mg. should be adequate for the treatment of most mild or moderately severe infections. In severe infections, 100 mg. every 6 to 8 hours, or 250 mg. every 12 hours may be necessary.

Serum levels obtained by the recommended dosages are comparable to those provided by the oral dosage of 1 to 2 Gm. daily in adults. Antibiotic therapy should be continued for at least 24 to 48 hours after all symptoms and fever have subsided.

In certain diseases specific courses of therapy may be recommended as a general guide. In primary and secondary syphilis for example, the daily administration of 2 Gm. oxytetracycline, orally, in divided doses for two weeks has given good results. In cases of gonococcal infection two intramuscular injections of 250 mg. each, or one intramuscular injection of 250 mg. combined with one gram given orally as a single dose, will usually suffice, but repetition of this therapy will be required in an occasional case.

In the treatment of hemolytic streptococcal infections, therapy should continue for at least 10 days to prevent development of rheumatic fever or glomerulonephritis. In the treatment of staphylococcal infections indicated surgical procedures should be carried out in all cases.

Pediatric: A dosage of 3 mg./lb./day in two doses has been found satisfactory in the treatment of most mild to moderately severe infections. For more severe infections, higher dosages may be indicated and should be adjusted accordingly.

Terramycin Intramuscular Solution provides maximum absorption and patient toleration with minimal local irritation.

Supply: Terramycin (oxytetracycline) Intramuscular Solution: available in single dose, prescored glass ampules containing 100 or 250 mg. oxytetracycline/2 cc., Isoject[®] syringes containing 100 or 250 mg. oxytetracycline/2 cc. and 10 cc. multiple dose vials containing 50 mg. oxytetracycline/cc.

More detailed professional information available on request.

"SPECIALIST"

*on hundreds
of cases*

Just as many doctors specialize, we have concentrated our efforts in selecting and retailing the finest wines in the world. In a sense, we are "specialists", too.

We have more than 1600 different types of wines from which you can select. If you're uncertain as to the right wine for a particular occasion, we'd be very happy to help you, just as we have helped thousands of others enjoy the finest wines in the world. We are "specialists" on hundreds of cases of the finest vintages. Let us help you select from the largest array of wines in the area. As a matter of fact, we have a one-third greater selection than any wine shop in New York. Another "plus". Join our Vintage Guild. Membership is free.

Please see our "specialists."
No appointment necessary.



THROUGH THE MICROSCOPE

(Continued from Page 484)

probably because of the reduced mobility of the joints that comes with older age.

—Heath Insurance Institute

'TRAVIATA' DOCTOR ACCUSED OF POOR MEDICAL PRACTICE

Verdi's renowned opera "La Traviata" provides a good example of medical malpractice, a professional medical journal reports.

In the last act the heroine, Violetta Valery, is dying of tuberculosis. That's when the plot thickens and her physician, Dr. Grenvil, shows an appalling lack of professional ability.

The trouble begins when the doctor arrives carrying flowers "and proceeds to sit familiarly on her bed."

"After these lapses in professional behavior, he fails to feel her pulse, listen to her lungs, take her temperature.

"Finally, he kisses Violetta on the forehead (questionable ethics and very bad hygiene), then he announces to the maid Annina — in a fine bass which easily reaches the back rows of the gallery and surely can be heard by the patient — that death is only a matter of hours away.

"To the physician in the audience, whose guarded prognoses are always issued in more guarded terms, this seems little short of crystal gazing."

Yet the prediction turns out to be accurate. Shortly, Violetta collapses and takes eight measures of music to die, although according to the article a major pulmonary hemorrhage would have carried her away in two measures."

Despite Dr. Grenvil's shortcomings, though, the article points out that medicine in the mid 1800s "was indeed relatively helpless against the scourge of tuberculosis."

Physicians, it adds, were often the custodians of disease rather than its master.

Modern medical treatment, the article says, could have cured the heroine — and probably ruined a great opera.

Modern health insurance practices, too, says the Health Insurance Institute, would have helped with Violetta's recovery.

A modern major medical expense policy, for example, would have safeguarded the heroine against the prolonged medical expenses still associated with healing tuberculosis.

The value of this insurance is that it not only provides money for hospital and doctor bills but covers most expenses approved by a doctor, such as ambulances, private nurses, and medication, in-

(Continued on Page 532)

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No *in vitro* test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

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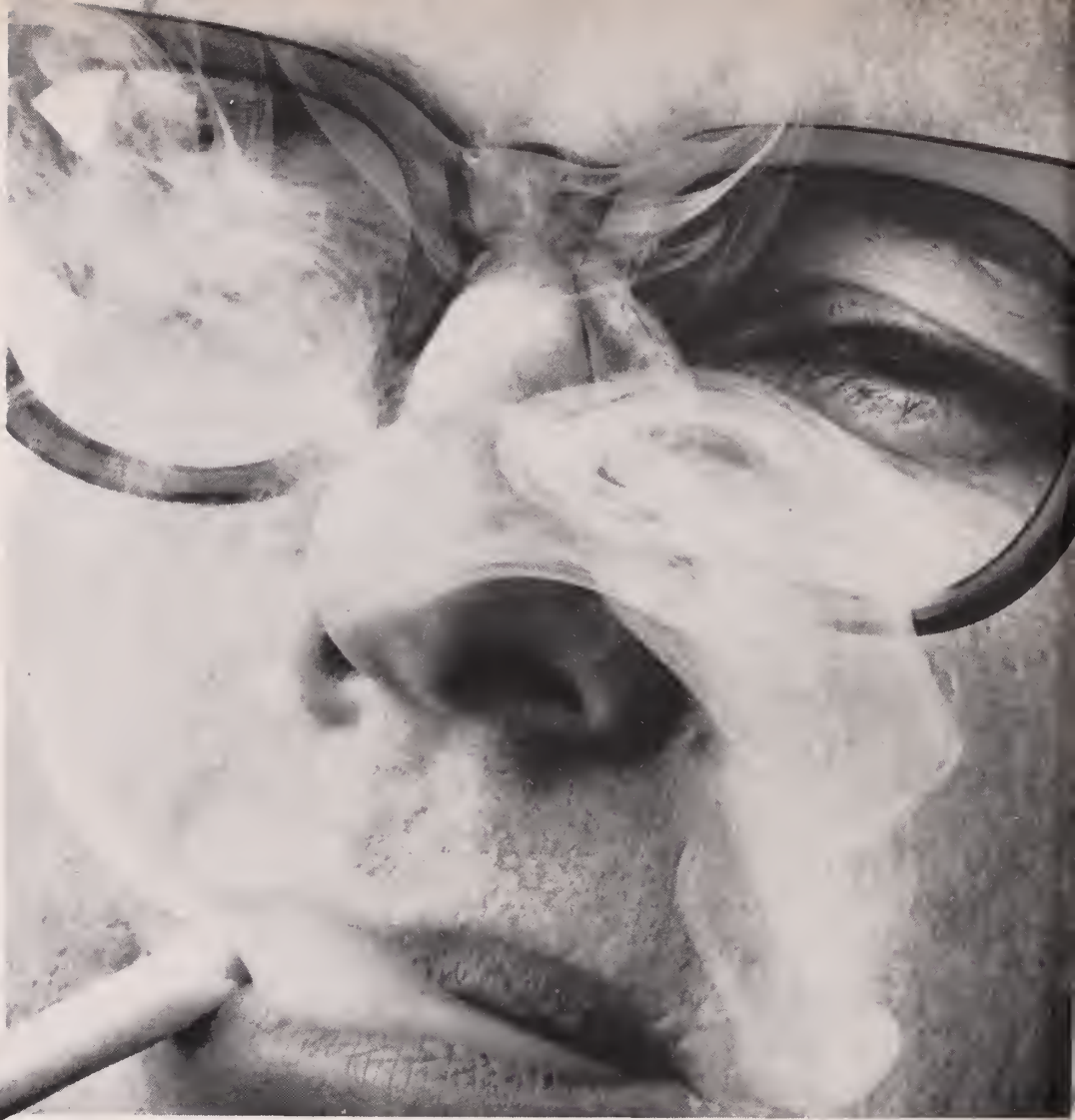
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Warnings: Administer cautiously to patients receiving phenothiazines or other CNS depressants or having history of convulsive seizures (See Adverse Reactions). Consider possibility of additive actions with alcohol or other psychotropic agents, particularly phenothiazines or MAO inhibitors.

Precautions: Avoid abrupt withdrawal after prolonged use, although withdrawal symptoms have not been reported to date. Exercise caution in addiction-prone individuals. If symptoms of hypersensitivity occur, discontinue at once and initiate appropriate symptomatic treatment. Avoid activities requiring optimal mental alertness if drowsiness or vertigo are present. As with any new drug, use cautiously in patients with history of drug allergies, blood dyscrasias, and hepatic or renal disease; periodic measurements of hepatic, hematopoietic and renal function should accompany prolonged and/or high doses.

Adverse Reactions: Most frequent reactions, rarely requiring discontinuation of tybamate, include drowsiness, dizziness, nausea, insomnia, and euphoria. There have been a few reports of skin rash, urticaria, and pruritus. Rare side effects include hyperactivity, fidgetiness, flushing, and tachycardia, suggesting excessive stimulation; also ataxia, unsteadiness, confusion, feeling of unreality, "panic reaction," fatigue, headache, paresthesias, vertigo, gastrointestinal disturbances, glossitis, and dry mouth. Grand mal or petit mal seizures have been reported in a few hospitalized psychotic patients receiving tybamate (up to 6000 mg. daily) together with phenothiazines and other psychotropic agents, but not with tybamate alone. Consider the possibility of rare, serious adverse reactions such as may occur with the related drug, meprobamate. If excessive amounts are ingested, gastric lavage and symptomatic therapy, including central stimulants as necessary, are recommended. Before prescribing, consult package circular.

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THE MEDICAL PROFESSION AND PEER REVIEW

Report of the Council on Medical Service of the American Medical Association as adopted by the House of Delegates at the AMA Annual Session in New York, July, 1969

For more than a decade, the Council on Medical Service and its Committee on Health Care Financing (formerly the Committee on Insurance and Prepayment Plans) have recognized a need for the establishment of professional review activities by medical society review committees and utilization review committees of hospital medical staffs. Initially, this interest was generated by concern over the continuing increase in the costs of health care, particularly for hospital services, and the resulting steadily rising rates required from the public for health benefits protection. In accepting a responsibility for professional review activities, the medical profession has demonstrated its awareness of the need to conserve the patient's health care dollar, educate and inform the profession in the economics of health care, assure the appropriate use of health care personnel and facilities, and maintain high standards of medical practice.

In 1959, the Committee on Insurance and Prepayment Plans sponsored a series of regional conferences directed primarily to problems of voluntary health insurance programs and definition of means by which the medical profession and insuring organizations might cooperate in resolving these problems and encourage expansion of voluntary health insurance to all segments of the population. As a result of the stimulus provided by these regional conferences, medical society review and utilization review functions in varying forms were established in many areas throughout the country.

During the ensuing years, the House of Delegates has addressed itself to the subject of professional review activities on numerous occasions and has consistently endorsed vigorous efforts to promote interest in and support for the establishment of local professional review.

In 1964, following a more detailed study by the AMA Commission on the Costs of Medical Care of selected professional review mechanisms which had been identified by the Committee on Insurance and Prepayment Plans, the Commission on Insurance and Prepayment Plans, the Commission sub-

mitted the following recommendations which were approved by the AMA Board of Trustees:

"Review mechanisms of professional origin should be further developed and varied, according to local custom and need so that the optimum relationship of private practice of health insurance and prepayment plans can be maintained.

"Review committees should be established by state and local medical societies. . . .

"A desired consequence of the activities of review committees is a mutual understanding by the medical profession, by voluntary prepayment groups and the health insurance industry of each other's point of view. Therefore, grievance committees should not be used to handle cases referred by third party payors on which only advice is being sought. The connotation of disciplinary action, surrounding the grievance committee, is detrimental to bringing about the desired result.

"Inasmuch as the judicious use of hospital facilities by the public and physicians is essential to the efficient and economic functioning of the prepayment voluntary health insurance systems, the state and local medical societies should urge and assist the medical staffs of hospitals to form hospital utilization committees.

"The AMA should act as a clearinghouse for information dealing with review committees. In addition to keeping current the number of medical societies which have formed various types of review committees, it should maintain detailed information along the lines developed in the study. As data are gathered on more programs, information covering their establishment and functions should be distributed to assist medical societies which may be contemplating the formation of such committees.

"The existence of review committees in given communities should be given wide publicity, their purpose and function making up the content of such publicity.

"Review mechanisms should be receptive to reviewing claims initiated by patients and third party carriers as well as by physicians."

Report D of the Council on Medical Service presented at the 1965 Clinical Convention responded to three resolutions (S/2-65), all relating to sections of PL 89-97 concerning utilization review. Report D contained seven recommendations which

are clearly applicable to the profession's responsibility to all third party financing programs. The full text of the seven recommendations adopted by the House of Delegates follows:

"Existing American Medical Association policy on utilization review programs and claims review programs be reaffirmed, thus making it abundantly clear that physicians should be continue to exercise the initiative in the development of effective and efficient review mechanisms;

"Medicine at all levels encourage trial and demonstration of varied approaches to utilization review and claims review in line with local circumstances to ensure progressive development of more effective and efficient methodology;

"The Board of Trustees urge the American Medical Association Advisory Committee (to the Social Security Administration) to persist in its efforts to achieve practical recognition by the Department of Health, Education, and Welfare that utilization review is a proper responsibility of hospital medical staffs while claims review is ordinarily initiated by third parties but carried out by the local medical society;

"Underuse of facilities and services should engender as critical a review as overuse and, in line with current principles and practices, utilization review should encompass the care of all categories of patients;

"The medical profession provide leadership in the study and development of practical methods for accumulating data on quality patient care and measuring the multiple facets thereof;

"Extended care facilities be given special attention by state medical associations and component societies to insure continuity and quality of care and effective utilization of such facilities; and

"State medical associations be urged to sponsor timely conferences similar to the national conference sponsored by the Council on Medical Service, November 27, 1965, to provide guidance for physicians in establishing utilization review and claims review programs at the local level."

In recent years, the increased involvement in financing of health care by the federal government and the implementing regulations of these financing programs have had an effect on Association policy regarding professional review. Board of Trustees Report CC (A-66) included the following statements:

"Insofar as the utilization review committee performs an educational function in keeping with the standards of the JCAH, this activity has the complete endorsement of the Board of Trustees. However, the Board is concerned about the professional problems which physicians may encounter."
(Continued on next page)

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counter when the committee undertakes to determine whether continued inpatient care is medically necessary for medicare patients and such determinations result in the termination of hospital insurance benefits. As a practical matter, the termination of benefits often may mean the termination of hospitalization. It is therefore essential that the utilization review committee discharge its responsibilities impartially.

"Final judgment as to whether a utilization review committee of staff physicians can carry out a fiscal function for the government without detriment to professional independence or to their primary responsibility to their patients must await a reasonable period of experience. The Board urges physicians who serve on utilization review committees and those who have need to consult with such committees on behalf of patients to keep the AMA advised through their component and constituent organizations regarding their experiences, both favorable and unfavorable.

"It is the Board's present position that physicians can best serve the interests of their patients and their profession by accepting, when called upon, membership on utilization review committees that carry out the functions prescribed in the law, and conducting such functions with complete professional objectivity and independence. Wherever feasible, utilization review should be assumed as the responsibility of the attending medical staff and not outsiders. Members of the medical staff are usually in a better position to protect the welfare of their patients and to evaluate the opinions of their associates regarding the medical needs of patients for further institutional care.

"Hospitals and extended care facilities whose medical staffs are too small to perform properly the functions of utilization review should request the medical staff of other hospitals or the local county medical society to provide physicians to perform this service. It is recommended that such requests be given favorable consideration whenever possible. If, as an alternative, utilization review is permitted to become the function of a governmental agency, the prospect is that such review may not be performed by qualified individuals. This could result in detriment to the welfare of patients and undue interference with the practice of medicine."

At the 1966 Clinical Convention, the House of Delegates adopted Report B of the Council on Medical Service entitled *Principles Relating to Functions of Medical Society Review Committees*. These principles have been widely distributed and publicized as "Guidelines for Establishing Medical Society Review Committees." Below are three of

the broad principles included in those guidelines which state the basic responsibilities of the medical profession in establishing and operating review committees:

"The medical profession should assume leadership in establishing forums through which the judgment, training, and experience of physicians in practice in the community can be brought to bear in the review of questionable cases involving either (1) usual, customary, or reasonable charges, (2) the effectiveness of hospital use, or (3) the necessity of the services rendered.

"Medical societies should establish and support professional review committees and provide the guidance and advice required to assure their optimal function.

"The committee should develop suitable criteria to evaluate adequately the individual and collective volume, cost, and quality of care, wherever provided. The review committee should stimulate area hospitals' medical staffs to develop appropriate mechanisms such as "utilization" committees for review of hospital admissions with respect to need for admission, lengths of stay, discharge practices, and evaluation of services ordered and provided."

Also at the 1966 Clinical Convention, the House adopted Report R of the Board of Trustees entitled *Policies Regarding Payment for Professional* (Continued on Page 493)

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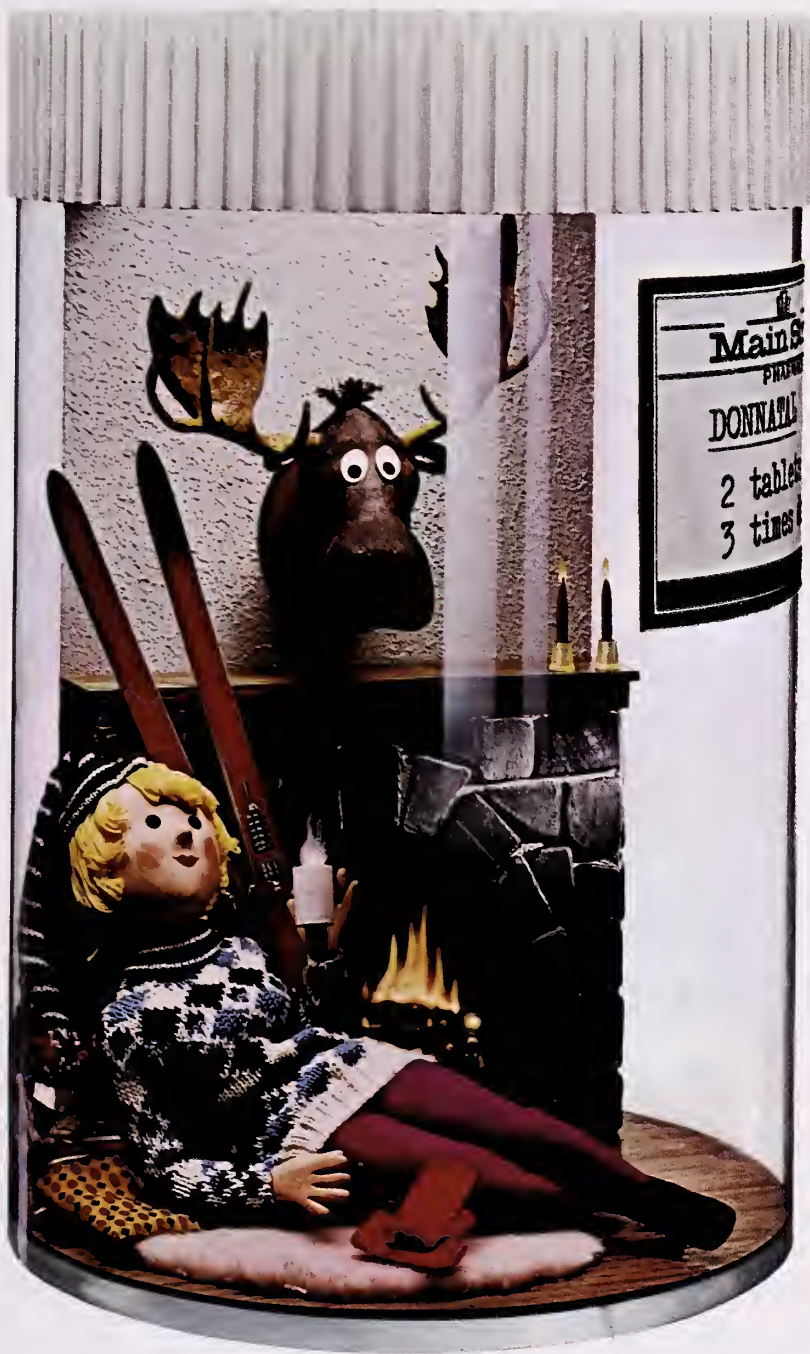
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PEER REVIEW

(Concluded from Page 492)

Medical Services. The first policy of this statement (as subsequently amended) says:

"It is proper for the physician to establish the fee which he charges to any patient for the professional service rendered, with recognition of the fact that a duly constituted local or state medical society committee of his peers may appropriately review and pass upon the equity and justice of his charge."

Numerous additional reports and resolutions accepted and/or adopted by the House of Delegates have emphasized and stressed the importance of and need for viable professional review functions. These reports and resolutions have related variously to financing of health care, government medical programs, health manpower, appropriate use of health care facilities, costs of health care, and conservation of the patient's health care dollar. An example of such statements is included in Board of Trustees Report Z (A-68) which said:

"The individuals directly involved in health care (patient and physician) should be expected to recognize and fulfill their responsibilities in the insurance method of financing health care whether the premium is paid by the individual, business, or government.

"Physicians have a responsibility in utilization review and quality control in order to preserve freedom in prescribing medical care.

"Patients must consider their medical insurance an aid in fulfilling their personal financial responsibilities for services received in order to maintain their freedom to select their services and the method through which services are provided."

Professional review mechanisms are active and well organized in many localities, but the Council on Medical Service has recognized that the full potential of local review functions has not been achieved and that they can and should be expanded and improved, offering all patients and all physicians the advantages of professional review. Potential methods to attain these objectives were the subject of a working conference on medical review, sponsored by the Council on Medical Service on June 8, 1969. The conference was attended by physicians experienced and knowledgeable in review practice and provided broad geographic and specialty representation. The conferees sought to determine whether additional activity at the national level could be productive in stimulating strengthened and expanded review functions by component societies and to consider means by which an action program should be developed. Based on the counsel and advice provided by the

participants at the conference, the Council on Medical Service will initiate a program to supplement local efforts and to develop specific and detailed guidelines for the operating scope and patterns of these committees. With the cooperation of physicians throughout the country who have demonstrated expertise in local activities consultation on review procedures will be available to medical societies or committees upon request.

The Council will sponsor a Medical Services Conference in Denver, Colorado, on November 29, 1969, the day prior to the Clinical Convention. The entire session will be devoted to an exploration of methods for implementing review activities which will be responsive to the needs of all parties concerned with the delivery and financing of quality health care: patients, physicians, third party financing organizations, and public agencies.

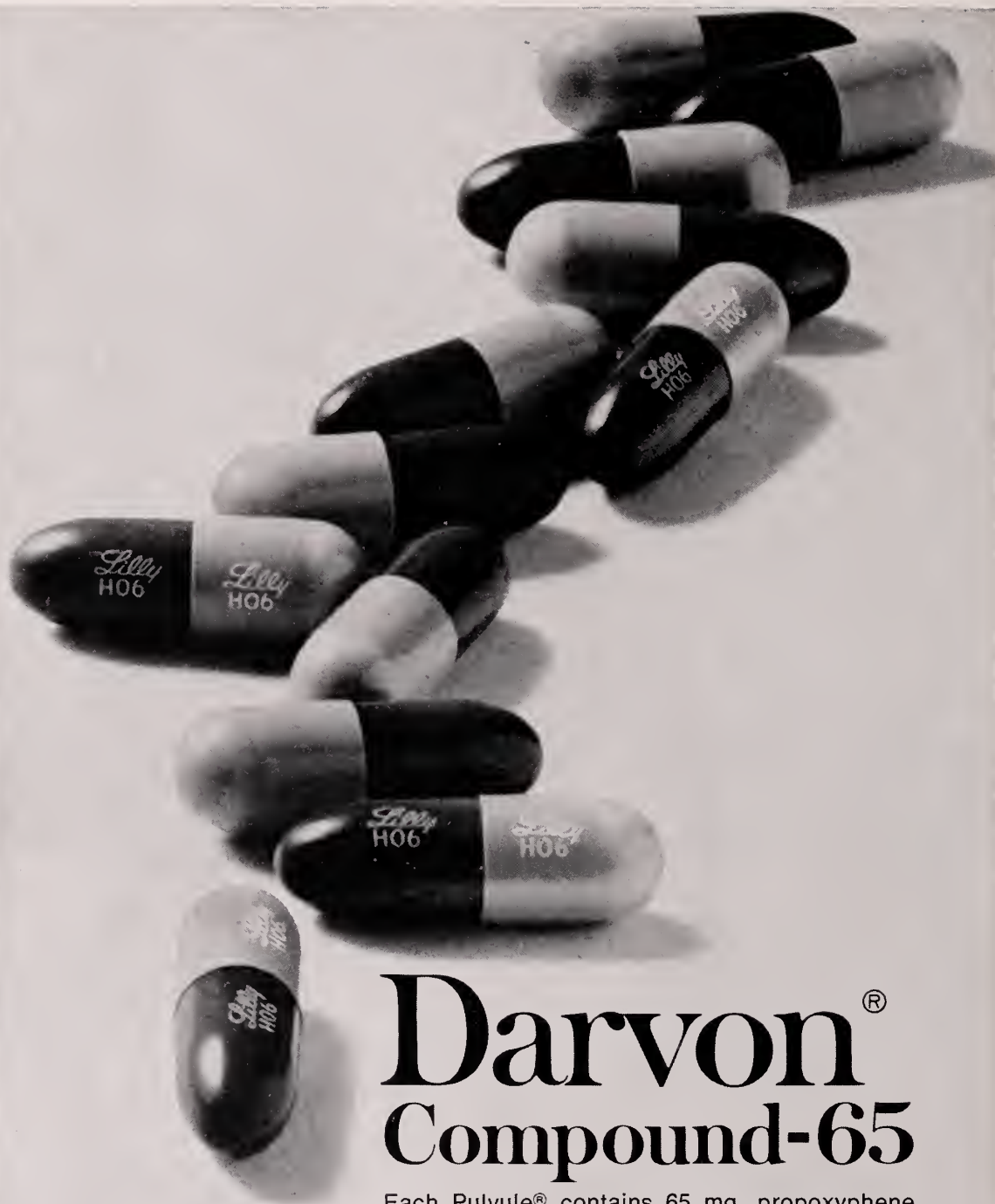
Information and data for the preparation of definitive guidelines for the operation of review committees are being collected. These guidelines will reflect patterns of productivity tested through proven application by state and county societies.

Professional review programs which have been identified and studied by the Council indicate a wide variation in the relationships which have developed between utilization committees and the corresponding medical society review committee and the functions which are performed by each. Further analysis of these respective approaches should prove valuable in assessing the operational spheres of local review procedures and assure that all needed areas of evaluation exist.

Recent developments clearly indicate the measures which might be undertaken by government agencies in an attempt to impose limits on fees for physicians' services and to prescribe levels of utilization of health personnel and facilities. Such measures may be injudicious and may disregard vital questions of medical need. These developing pressures reinforce the need for and the essential importance of review functions performed by the profession.

The Council on Medical Service knows of no greater challenge facing the profession today than to secure universal acceptance and application of the review concept as the most meaningful method for creating a public awareness of medicine's efforts to assure high quality of health services at a reasonable cost, slowing the rate of escalation in health care charges, stimulating health insurance organizations to make broader protection available to more people, and retaining professional control in patient-physician fiscal and economic relationships.





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MEDICAL EDUCATION — AN INTERNATIONAL PICTURE*

It is a great honor to be invited to address your two Societies, and a considerable pleasure to return to New England, particularly on this occasion with my wife, Doctor Kathleen Pearson. We are both so grateful to you for the opportunity. This custom of pratising in one's maiden name has spiced many holidays, with the look of envious disapproval on the face of the hotelier when Doctors Pearson and Byrne sign into their room.

My wife is a welcome, solicited critic; but, however fond a Petronius, her arbitration on my taste is often salutary. She looked at the material I proposed to present to you — "Yes" she said, "alright." "Hm! — I don't like this bit — ha, ha, ha, you can't use THAT."

You know that there has been for some time in British academic circles an ad hoc qualification, bestowed by the envious upon the smug—"B.T.A." or "Been to America." Both envy and smugness are the greater when for America one hears "New England." Doctor Johnson once remarked of Old England: "Sir, it is not so much to be lamented that Old England is lost but that the Scotch have found it." Now of course you have found the Scotch, and you put ice in it. At the same time you earn the accolade of Francis Bacon, in that being gracious and courteous to strangers, you are citizens of the world.

However, I must remind myself and you that there is a task to be fulfilled. It is hardly inappropriate that we should reflect on the problems of medical education, for in one facet of this protean exercise we have been indulging ourselves these last two days.

Such is the resurgence of interest in continuing education in Britain that a doctor's wife complained to me recently that she was sorry that her husband had given up golf as she was now a postgraduate widow.

It would appear somewhat less appropriate that I should be a person to discuss these problems.

*Presented at the banquet session of the Joint Annual Meeting of the Vermont State Medical Society and the New Hampshire Medical Society, at Burlington, Vermont, May 23, 1969.

DR. PATRICK S. BYRNE, O.B.E., M.B., Ch.B., F.R.C.G.P. of Manchester, England.

Senior Lecturer in General Practice, University of Manchester, England; Chairman, Education Committee of the Royal College of General Practitioners; for thirty years in general practice in rural England.

The naive enthusiasm of an expanded provincial, in more senses than one, is a small qualification to discuss a major topic with you. I do not know that I can clearly define the problems, much less propose solutions; I may only attempt to do so, comforted by Wilde's remark "that on an occasion of this kind, it becomes more than a moral duty to speak one's mind — it becomes a pleasure."

There appears to be one firm starting point. Knowledge of advances in medicine has always been immediately and internationally published. We have a situation therefore where there is available at any time to any country in the world the global aggregate of medical knowledge, and hence of medical possibility. There is a vast à la carte menu which could be found in any situation where the nourishment of medical education is provided. The first problem is that not all the educational head chefs and their staffs are competent to produce all the dishes, either through their own lack of knowledge and experience or because the educational kitchens and restaurants have not the equipment nor facilities to prepare and serve them.

DISTRIBUTION OF MEDICAL CARE

The next problem we might consider is that the possibilities of the wider discipline of medicine are rarely equated with their practical application — the delivery of medical care. There appear to be various reasons for this. A major conditioning factor is simple and universal — physical geography; then come population size and density, followed by such powerful influences as national or regional affluence, technology, social mores, and national cultures or sub-cultures, not to mention — and I promise to use the word only once — politics. We are not surprised, bearing in mind these factors, that medical care in Dawson City varies markedly

(Continued on next page)

from that in Calcutta, in Manchester — England you know — or Boston.

Now medical education stems from the medical schools. Yours and ours, and many others still exhibit the clear prints of the dead hand of Abraham Flexner. For it is to him that we owe the creation of the whole-time academics in medicine, perhaps that circumstance more than any other which has so long and so powerfully operated on thinking and practice in education for medicine. Emphasis in medical education stem to a degree from the attitudes of the educators, and this is an area which might be considered later in more detail. But to continue the argument, I would remind you of what must surely be the basic functions and purpose of a medical school. They are to produce and sustain doctors to give medical care to people, and to advance medical knowledge.

It is the desire of the whole-time academic department to emphasize the latter objective, while it is by and large the heads of such departments who are themselves the most powerful and influential people in shaping the policies of a medical school. What has happened therefore, both in my country — and I feel certain in yours even before us — is that we have designed our medical education to produce the best scientifically trained doctors that we may, hoping, if indeed we have considered it, that they will all in medical practice fit into such a system of medical care as obtains.

In my country I believe that there is now a realisation of this situation, more particularly in regard to my own discipline of general practice. We have educated about half of our total of practising doctors in a way and in situations which have the reverse effect of that which we should have sought to achieve — that is to fit them to practise in the system of medical care we have accepted.

You may not agree with the outlined argument produced, but let us look at some pragmatic examples. When the new medical school was founded at Ibadan, Nigeria, about twenty years ago, they intended to out-Hammersmith the Royal Postgraduate Hospital. Is this appropriate in a country of 55 million people, containing at the present time only 2,000 doctors? In Britain we have 24,000 general practitioners, who may not practice in hospital, except as underlings. Yet we continue the *bêtise* of training them, or more truthfully permitting them to seek an ad hoc training for themselves, only in hospital, hoping they will fit into their niche in the medical system in the community. You have produced so many specialists that the morbidity pattern of the communities cannot provide the material for the whole-time use of their skills.

RELUCTANCE OF PHYSICIANS

In these three disparate situations there is at least one major problem in common: the reluctance of physicians to practice in what are to them disliked situations. You share with Nigeria the problem that physicians do not wish to practice in rural areas. We do not because we have no areas in our “wrong little, tight little island” which by your own or Nigerian standards can be considered rural or remote. We all share the problem of persuading physicians to practice in the less savory areas of large cities or conurbations. While then we have subscribed to part of one objective of the medical school by certainly producing, and even sometimes attempting to sustain, doctors, we have not been as successful as we might have been in persuading them to give medical care to people where it is most needed.

We might next consider how some of these developments have occurred. In a recent paper, Dan Furkenstein¹ suggested that we can discern four distinct periods of major emphasis in medicine.

The first was until 1939 the era of general practice. The second from 1939 to 1950 was the era of the specialist. The third from 1950 until now was the era of the medical scientists, and finally he suggests we are entering the era of emphasis on community medicine. The meaning of this term is subject to such confusion in interpretation that we might clear the air by defining it as “the practice of medicine in the community by means of teams of interdisciplinary composition”—the “third faculty” of Stewart. In the United Kingdom we define it as “the study of epidemiology,” as suggested by the Royal Commission.

These suggestions were based on studies and discussions with a firm focus on Harvard Medical School students and graduates. We might agree that this group represents a highly selected cadre. The truth is that a majority of their present students are expressing a determination, which one suspects they are likely to fulfill, to concern themselves with the administration — not the practice — which would be left to lesser lights like me — of medicine in the community. A recognition that all is not well in the state of Denmark — be it U.S.A. or U.K.

Kurt Deuschle² at Lexington, Kentucky, remarked in 1966 that “if only the national schools like Harvard and Duke could see more clearly their duty to define the ways of delivery of medical care and then provide training for defined roles, they could produce leaders in every branch of medicine.” From their position of earned prestige these schools have the privilege of experimentation and can afford to make mistakes. State schools

like Burlington (Vermont) and Lexington (Kentucky) must consider the delivery of medical care, and their experiments have less value in the educators' eyes.

ATTITUDE OF MEDICAL SCIENTISTS

On the whole in your country and mine, the medical scientists disapprove of the idea that we should produce doctors to give medical care. They intend to replicate themselves and advance medical knowledge. It is indeed their right to disapprove if they so desire, but their main contribution might well be to proceed with their science and refrain from attempting to block measures which they do not wish nor pretend to understand. The delivery of medical care is at least as important as the progress of that science which influences it. More so perhaps for science is not restricted to the laboratory. Science unapplied is sterile, while the point of application of medical science is man — the patient, the person. Such has been the prestige of science that in most countries the views of scientists on matters outside their own fields have been accorded a reverence which might have been reserved for the sphere in which they are admittedly pre-eminent. This is not to say that such views are not deserving of considerable respect, but they do not deserve the almost *ex cathedra* reception which they often obtain. It is true that in Burlington there is a great consciousness of these problems, but such an enlightened medical community is as yet atypical of the many here or in Britain.

It must be necessary to define the problems of the communities we are to serve. Here the three examples quoted earlier are again relevant. The sheer weight of untreated morbidity in a country like Nigeria is made even heavier by a population predominantly rural, unaccustomed and ill-disposed to travel, with an acknowledged preference for older and more mystical medical methods than our newer scientific Western developments.

RESURGENT NATIONS

Much the same situation obtains in all the resurgent African nations, in India, Pakistan, and many countries of the Far East. How may they reconcile their needs for large-scale public health or preventive medicine exercises, for competent generalists in medicine and surgery — the latter most particularly — with a desire to produce doctors who are demonstrably the equivalent of the best medical scientists in the world? A desire which unfortunately stems from wishful thinking of national prestige. We cannot escape the fact that the populations of these countries far exceed those of the developed West. In the eras of the specialist

and scientist you have over-produced specialists without any heed to your national morbidity patterns. Few of them are able to function wholly in the practices of their specialty, across the country as a whole. Specialists indeed, with national certificates to support the fact, but look at some figures. In several cities in the United States, one attempted to look at the number of medical personnel providing care for a population which equated with that cared for by a typical district general hospital group at home in the United Kingdom — about 180,000 people. Thirty-five internists, 20 general surgeons, 10 obstetricians, and 3 neurosurgeons, as random examples of specialist numbers, were quite usual. We would have 4 general physicians, 3 or 4 general surgeons, 2 obstetricians, and two-thirds of a neurosurgeon. The latter is not a thalidomide type, but merely an individual who serves in more than one area. I make no suggestions as to which, if either, is right or wrong, but merely indicate a factual proportion which one finds confusing. In either case if the figures reflect the patterns of care, they must have an important bearing on medical education — and perhaps explain a national shortage of disposable organs.

Included in the areas of the advancement of medical knowledge should surely be knowledge of the optimum methods of giving medical care to the communities in which we serve, and it is only recently that both our countries have begun to study these problems on a national basis. Indeed, I understand that Vermont is a prototype area for studies set up as a result of the De Baakey report. David Rutstein³ in "The Coming Revolution in Medicine" makes a firm and detached plea for such exercises.

In the past year I heard Ministers of Health in two different countries — neither of them my own — say that their system of medical care was the best in the world. Apart from the fact that these modest claims could not both be true, in each case the remainder of the speech confirmed a complacency which would preclude research.

RESEARCH INTO MEDICAL EDUCATION

But there is surely a need also for research into the production of the doctors who give medical care. Sir Eric Ashby⁶ commented: "Nor is there any reason why we should regard research into the production of educated people as any less important than research into the production of steel or artificial fibres." He went on to say of the Universities that "although dedicated to the pursuit of knowledge, they are reluctant to pursue knowledge about themselves." Here is another field of re-

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search which successfully tilled could produce a most valuable crop of information for educators.

A fortunate and not by any means calculated advantage of our own system of care has been that to make it possible to define accurately the morbidity patterns of our communities. Now we are able to define the expected role and function of physicians in our system of medical care, and to commence to train doctors prospectively to fill these roles.

If it be conceded that this can and should be done in any country, yet further problems arise. Medical education is a highly expensive commodity, expensive alike for the community and for the student, expensive in terms of money and of time. It is surely necessary to attempt to measure that all are getting value for money, that educational programs are evaluated, not merely by the feedback process of examinations, but by assessments yet to be devised to measure the values of care given by the postgraduate in service.

Next of course is the problem of sustaining the continuing education of the in-service physician. Medicine is changing so rapidly, society is changing and developing so that the proposed functions and needs of the physician will themselves have to change in parallel while he is in service. Hence we must devise methods of continuing education flexible enough to meet needs not yet known, and we must inculcate into those we train an Oslerian determination to maintain their own education.

CONTINUING MEDICAL EDUCATION

It is fascinating to see the various methods proposed and sometimes used. Geography is a most important factor here. The radio programs of Albany, Yale, and U.V.M.*; the telephone programs of Wisconsin; television on the Australian Broadcasting Commission network, backed up by programmed literature, are much better than our own amateurish methods. In U.B.C.,** Kansas, and U.V.M. members of the faculty travel out into the distant community hospitals. U.V.M. itself is proposing new and most interesting programs.

We have in our postgraduate medical centers discovered an excellent way to provide not only education for, but intercommunication of all branches of the health service. When the pattern of these centers is shortly complete throughout our country, few doctors will be more than 30 or 40 miles away from a center. Here they will find an adequate library, audio-visual aids, and private study carrels; a planned series of programs for all; and an excellent opportunity to meet and discuss medicine with both medical and paramedical colleagues over a wide range of medical disciplines.

*U.V.M.—University of Vermont

**U.B.C.—University of British Columbia

We are hoping for a useful addition to domestic study in the shape of the electrovideonic recording system developed by the Columbia Broadcasting System. By this means we may watch, with our wives, "Gone With the Wind" in four easy lessons, and learn painlessly how to play golf or speak Spanish, or so the purveyors of this millenium would have us believe. We may also study medicine at home with the aid of material made for the medium. In our own University we are making educational material which relies on educational rather than promotional techniques, and are producing systems of evaluation. Such is the pressure of drug salesmanship; so varied the claims and the actual efficacy, that an accurate knowledge of therapeutics is difficult to obtain. You all know that a drug is that substance which when injected into a guinea pig produces a paper. Unfortunately it also produces what are known to the drug companies as "side-effects" and to our profession and our patients as "iatrogenic disease." We are beginning to have some small success, based on a recent government report on the industry, in persuading the pharmaceutical firms that a soft sell based on genuine education in pharmacology and therapeutics is a better and more dignified method of promotion than their conventional distribution of those fire-lighters call "advertising mail." Practising physicians in many countries find library facilities inadequate for various reasons. New textbooks are very expensive. Lange of Los Altos appears to have made a significant advance in this field by their inexpensive, limp-bound reproductions direct from typescript.

In a short time we shall be implementing the first of the recommendations of the Royal Commission Report on Medical Education.⁴ We are to have mandatory postgraduate training: three years of general professional training and a minimum of two years further professional training for all doctors — i.e. including general practitioners. The General Medical Council has announced its intention to create a specialist register and national specialty boards akin to your own. We have commenced to tackle the problem of overseas doctors who are flooding into Britain, often ill-equipped for linguistic communication. With them, unlike Shaw's comment on yourselves, we are divided by uncommon languages.

This brings us to another international problem of medical education, on which I heard Margaret Mead speak so sensibly in Chicago three years ago — the problem of graduates from developing lands who, coming to our respective countries, receive postgraduate education then fail to return home where their services are so much more necessary. Some of these countries however, notably India, are positively discouraging return by refus-

ing to recognize foreign qualifications either for seniority in their own service or as evidence of training. Western medicine has singularly failed to train these people for the context in which they will work, and we support our own services with too many who are more greatly needed in their own countries.

TRAINING FOR MEDICAL CARE

Now I would suggest to you that we can see some problems common to all countries whatever their stage of development. The first is the need to train doctors prospectively to fill defined functions in the national system of medical care. The second is to persuade many educators that young doctors must be produced to give medical care to people. Hence, in many countries, a shortage of manpower for medical service suggests that the advancement of medical knowledge must be, at least temporarily, a lower priority. Thirdly, we evaluate our education hardly at all, and this we should surely learn to do. In this field there must be a competence and willingness for self-evaluation — Doctor Lawrence L. Weed has illuminated a way. In all these problems it is in the field of attitudes that the greater changes are required; the attitude of some academics that the medical care of people is a second-rate operation, that science is the be-all and end-all; the attitude of many patients, to which we have in some part conditioned them, that they should always see a specialist. In many places we have been singularly unsuccessful in encouraging the maintenance of a sense of vocation in medicine. To some degree this is a fault of our educational process or perhaps of some educators. I quote to you, unashamed, some words of Pope John⁵ as a seminarist in 1901: "But I am not going to be a priest just to please someone else, or to make money, or to find comfort, honors, or pleasure. It is simply because I want to be able later on to be of some service to people." This is the real meaning of vocation. It used to apply to medicine, and indeed I hope that those whom we may teach and train will keep untarnished something of their youthful vision.

The attitude of viewing the patient as a whole person is one which is subjected to more lip-service than practice. The doctor-patient relationship is termed "witchcraft" by some colleagues who have not, I suspect, ever been a patient. To a large degree we blame medical education for this. In many medical schools teaching is still based on the disease concept of illness. The equation that illness = disease = diagnosis is organically based and has much to commend it in a crisis. But for continuing medical care it is worse than valueless. It promotes the implicit thinking that the diagnosis of organic illness is all that is necessary. The more scientifically trained the clinician may be,

the more scientific his thought processes should have become. He should have learned not to theorize in advance of his facts, and diagnoses of illness based only on organic information are examples of such an intellectual crime. In all situations of continuing care, and in most others, the patient's illness should be considered and assessed in organic or biological, psychological, and social terms; and all students should be taught to think of people in this way — in other words, to collect all the available data before proceeding to define problems.

ART OF MEDICINE

With the progress of science, curative medicine is becoming ever easier. The difficulties lie, and will continue to lie, in learning when to intervene, to prevent or to cure. Man however has his spirit as well as his chromosomes, his D.N.A., his mental and organic functions. It is the healing and care of the spirit which in part defines the art of medicine. More of the art lies in knowing when not to apply the science. It is in this field of healing the mind and spirit that we lag furthest behind. It is a field of higher education which is largely virgin soil. We are urged to applaud new prospects of transplantation and the creation of human life in the laboratory. We must do so. Yet the creation of human life in the laboratory sounds socially dull, and is notable mainly as a prospective source of spare parts. It is as interesting, exciting, and valid to discover the science and provide the art of helping adequately those beings naturally created — the persons harrassed in mind and spirit.

Our attitudes to the machine may be detrimental to good education. The young are taught to rely more and more on machines in clinical practice — radiology, the laboratories of many types, the computer. The computer, we are told, will diagnose, monitor, control, and record more accurately than any clinician. Indeed it will, but it can never listen. It may well serve as a superb cerebral cortex, but it will never replace a very ordinary old brain. No machine is better than the men who make, service, program and interpret it. We need machines, but as servants whose employment we control and whose services we use only when they are necessary. We must be careful to teach the basic clinical skill of listening. The old-fashioned computer of a medical mind is still good enough to cope with most problems of illness, if only its owner has been taught and encouraged to use it. That most improbable doctor — Falstaff — observed: "It is the disease of not listening, the malady of not marking, that I am troubled withal." Let every educator heed him. Having listened, the student should be taught that every clinician is as bad as his clinical records.

(Continued on Page 511)

THYROID CRISIS IN A COUNTY HOSPITAL*

Thyroid Crisis Incidence Higher Where Socio-Economic Factors Engender Inadequate Medical Care

Thyroid crisis or storm is a severe, often fatal exacerbation of the manifestations of hyperthyroidism, which requires prompt recognition and energetic treatment, if the patient is to survive. It was at one time a serious and not infrequent complication of thyroidectomy for hyperthyroidism. In 1934 Ransom¹ reported 37 fatal cases occurring within a six year period, accounting for the 70 per cent of the deaths associated with thyroid surgery at the University of Michigan prior to 1930. Reported mortality rates have varied from 50 to 100 per cent among those developing the syndrome.²

Pre-operative administration of iodine and anti-thyroid drugs have reduced thyroid crisis to a relative rarity.^{3,4} Furthermore, newer therapeutic measures have reduced its mortality significantly. In 1960 Waldstein⁵ reported a mortality of 25 per cent. Harrison¹⁰ in 1968 stated that, although the mortality was still 25 per cent, the incidence of thyroid crises had dropped to the point that single cases following surgery were now reported in the literature.⁶ Since the significant decrease in incidence of post-surgical thyroid storm, more cases of spontaneous or medical thyroid storm or crisis without surgical trauma are being seen. This has been a result of advancing civilization and improved medical care, earlier diagnosis, and proper treatment. The incidence of thyroid crisis at Boston City Hospital is reported to be about one case per year. Presently most cases are not diagnosed prior to the occurrence of storm. Thyroid crisis has been reported following administration of radioactive iodine for therapy,⁸ possibly because of release of thyroid hormone from the thyroid gland damaged by irradiation.¹⁰ It has been reported following excessive ingestion of thyroid hormone.¹¹

The hyperthyroidism may be known or occult. In more than half of the cases of crisis one or more precipitating factors may be recognized. In the remaining cases precipitating factors cannot be identified. Some of the important factors that can precipitate a crisis are: thyroid surgery, general surgery, infection of any type (local or systemic), pre-eclampsia and delivery, fear and anxiety, palpation of thyroid gland, insulin reaction

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and other stressful situations, pulmonary embolism, radioactive iodinated albumin (RAI) therapy, and withdrawal of antithyroidal drugs.

The criteria for the diagnosis of a thyroid crisis are not absolute. McArthur and associates⁹ defined thyroid crisis as a "life endangering augmentation of symptoms of thyrotoxicosis." In addition to the exaggerated manifestations of hyperthyroidism fever, marked tachycardia and signs of central nervous system, cardiovascular, hepatic, and gastrointestinal dysfunction are prominent. The diagnosis of thyroid crisis depends on exaggerated symptoms of thyrotoxicosis in association with marked tachycardia and fever of 100° F. or greater.⁵ Fatal thyroid crisis has been reported with a temperature of under 100° F.

CASE REPORTS

Case 1. — A 63-year-old colored married male was investigated in August 1965 for possible hyperthyroidism, but no conclusive diagnosis was made and he received no treatment. On August 8, 1966 the patient was admitted to the hospital for weakness, palpitation, and diarrhea. He had all of the signs of hyperthyroidism with a temperature of 100° F., pulse 130 and irregular, blood pressure 160/64 mm. of Hg., and respiratory rate of 20/min. On 8/10/66 he became critically ill, his heart rate increased to 158/min., heart rhythm became irregular, bilateral basal rales appeared, and he developed a temperature of 104° F. He was placed on bed rest and was given an antibiotic, expectorants, digitalis, diuretics, oxygen, reserpine 2.5 mg. intramuscularly every six hours, Tapazole® 20 mg. orally every six hours, high calorie diet, and Lomotil®. His chest x-ray study and urine and sputum cultures were negative. Protein bound iodine (PBI) was over 12.8 microgram per cent. His triiodothyrene (T₃) uptake was 60 per cent. I¹³¹ uptake (24 hour) was 57 per cent. His condition was controlled by this regime, following which he was treated with 12 millicuries of radioactive iodine and discharged.

Case 2 — A 19-year-old white single male was discharged from the Army with a diagnosis of hyperthyroidism. He had been taking propylthiouracil, which he discontinued on his own. He was admitted on 10/26/66 with a history of nervousness, palpitation, sweating, weakness, and chest

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pain of two days' duration. His temperature was 101° F., blood pressure 150/80 mm. of Hg., pulse rate 120/min., and respirations 20/min. His thyroid gland was diffusely enlarged and a bruit was heard over the gland. He complained of epigastric pain, and tenderness could be elicited. Blood and urine studies and throat cultures were negative. Chest x-ray study was normal. PBI was over 12.2 microgram per cent (normal 3.5 to 8). T₃ up take was 48 per cent (control 28 per cent). Basal metabolism was +40 per cent and +24 per cent. His electrocardiogram showed sinus tachycardia with ST-T changes of tachycardia, ischemia, or both. The patient was treated with bedrest, sedation, and Tapazole®. He became afebrile in 24 hours and improved progressively.

Case 3 — A 49-year-old white divorced female was admitted on 12/24/66 with a history of 30 pound weight loss in six months and enlarging mass in the neck of four months' duration. She also had glycosuria of recent onset, atrial fibrillation, and congestive heart failure of recent onset. The congestive failure was resistant to the usual therapy. She gave a history of Parkinsonism of 10 years' duration for which she had been taking Artane®. On admission the diagnosis of hyperthyroidism was evident. There was diffuse enlargement of the thyroid gland, marked tremor, weakness, nervousness, and anxiety. Her pulse was 120/min. and regular. While she was under study she developed a temperature of 101.8° F., pulse rate rose to 140/min., and rhythm became irregular. Blood pressure was 120/60 mm. of Hg. Her body weight dropped to 97 pounds from 103 pounds, and she became weaker and tremulous. Intensive therapy was begun at this point including bedrest, humidified oxygen by tent, and cooling. Reserpine 2 mg. was administered intramuscularly every six hours, and sodium iodide 0.5 gram intravenously every six hours. Fluid administration was monitored by central venous pressure catheter. Patient also received Tapazole® 20 mg. every 8 hours orally, and regular insulin as needed depending on the urinary spillage of glucose. Digitalis and diuretics were given according to need. She became afebrile, and her symptoms slowly improved. Heart rate was easily controlled, and sinus rhythm was restored after therapy. Diabetes was eventually confirmed by glucose tolerance test. Laboratory studies revealed a PBI of over 12.8 microgram (normal 3.5-8), cholesterol 135 mg. per cent, T₃ uptake 48 per cent (control 28 per cent), and RAI uptake 62.1 per cent at 24 hours. When she was well controlled, she was given 7.09 millicuries of radioactive iodine (RAI) as definitive therapy and followed as an outpatient.

Case 4 — This 15-year-old colored single female

was mentally retarded since childhood. She was treated for respiratory infection and congestive heart failure in 1966, and discharged with a diagnosis of mongolism and congenital heart disease, probably ventricular septal defect. She was admitted on 4/21/67 after a week's treatment of a sore throat with penicillin. Complaints were fever, nervousness, and marked generalized weakness to the extent that she was unable to stand up. She also had diarrhea of two days' duration. Examination revealed a temperature of 103° F., marked tremors, weakness, and periodic inability to speak. She was mentally retarded, exhibiting all the other features of mongolism. She was in congestive heart failure with a rate of 150-160/minute. Patient received digitalis, diuretics, salicylates, antibiotics, and expectorants without benefit. Blood cultures, throat cultures, urine cultures, stool cultures, differential white blood count, urinalysis, and chest x-ray studies were all within normal limits.

After drawing blood for thyroid studies and other investigations, patient was given sodium iodide 500 mg. intravenously every eight hours, Tapazole® 20 mg. through nasogastric tube every 6 hours, and Decadron® 5 mg. every six hours. She was placed on bedrest, and maintained on oxygen with humidity, total body cooling with hypothermia blanket, high calorie and salt restricted diet, and intravenous fluids monitored by central venous pressure. Reserpine 1 mg. intramuscularly was administered every 6 hours, and digitalis and diuretics were used as needed. During therapy she had developed incipient renal failure with blood urea nitrogen of 99 mg. per cent and creatinine of 3.5 pmgm. per cent. These were reversed without great difficulty. Acute renal failure^{12,13} in thyroid crisis resulting from primary tubular damage has been reported in the literature. Patient improved slowly. Laboratory results revealed a PBI of 10 microgram per cent (normal 3.5 to 8), T₃ uptake 58 per cent (control 28 per cent), and antistreptolysin (ASO) titer of 800 Todd units, reflecting the preceding streptococcal infection of the throat. Protein electrophoresis showed a monoclonal gammopathy. Uric acid level was normal. Eight months later an immunoelectrophoresis showed 1gG 2520, 1gA 218, and 1gM 30 mg. per cent respectively.

Her bone age was five years above her chronological age. Bone marrow examination showed a slight increase in plasma cell series. Cardiac fluoroscopy revealed no significant chamber enlargement, but a pansystolic murmur at the left parasternal region in the third and fourth intercostal spaces persisted. Cardiac catheterization studies are being planned. Buccal smear for Barr bodies re-

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vealed female genotype, while chromosome studies revealed G21 trisomy. Patient does not need cardiac glucosides at the present time and is taking only Tapazole®. She continues to do very well.

Case 5 — This 23-year-old female Negro, separated from her husband, was admitted on 9/14/67 with a history of insomnia, nervousness, feverishness, sweating, and weakness. She had a temperature of 101° F. orally, pulse of 124/min., and blood pressure of 148/58 mm. Hg. She had diffuse enlargement of the thyroid gland and a bruit over the gland. She also had marked tremors and muscle weakness. Initial studies were undertaken, and she was placed on bedrest with administration of sedatives and Tapazole® 10 mg. every 6 hours. Patient became afebrile and improved. PBI was 8 microgram per cent, and T₃ uptake 53 per cent. Radioactive iodine uptake later was 78 per cent at 24 hours. Admission urinalysis, blood count, chest x-ray study, blood culture, and throat and urine cultures were negative. Later she showed evidence of urinary tract infection for which she was treated prior to discharge.

COMMENT

The cases reported in this paper all had oral temperatures of 101° F. or higher without demonstrable infection. Three of our five cases received antibiotics empirically despite negative cultures and the absence of other specific proof of infection. In Case 1 therapy for thyroid crisis and antibiotics were started together, but investigation revealed no evidence of infection. Case 4 was treated with antibiotic for sore throat, but when thyroid crisis was recognized, antibiotics were discontinued. In Case 5 the antibiotic was given for urinary tract infection later in the hospital course after the crisis was under control and patient was afebrile (see Table 1).

PROPHYLAXIS

Prophylaxis is always better than cure. So prevention of crisis should be the major objective. The virtual elimination of post-thyroidectomy crisis by proper preparation of the patient has been a significant accomplishment in this direction. Early diagnosis and prompt treatment are necessary to eliminate spontaneous or medical thyroid crisis. Any hyperthyroid patient with fever even without evidence of infection should be admitted to the hospital and treated vigorously to avoid overt or control impending thyroid crisis. In such situations even palpation of the thyroid gland should be avoided. Postponement of any surgical procedures or other manipulations if at all possible until patient is euthyroid is desirable. If emergency surgery is mandatory, specific treatment for thyroid storm should be initiated and maintained until the patient is out of danger. Reactions to insulin and other drugs should be avoided. Antithyroid drugs should not be withdrawn for any purpose until the patient is completely euthyroid.

MANAGEMENT

In managing the patient who is already in crisis, prompt control of manifestations is essential for the survival of the patient. Treatment should be started immediately and directed toward the following objectives:¹⁰ Prevention of further production and release of thyroid hormone by the thyroid gland; prevention of release of catecholamines, the effects of which are augmented in the presence of excess thyroid hormone; and non-specific treatment depending upon the presence of infection, hyperpyrexia, dehydration, hypoxia, congestive heart failure, and impending relative adrenal insufficiency resulting from hypermetabolism.

Thyroid function can be rapidly and completely suppressed by pharmacologic doses of iodine; no other drug is as effective. When large amounts of iodine are administered to a patient with thyrotoxicosis, the thyroid gland will take up much more iodine than a normal gland. This results in inhibition of organic binding of iodine to tyrosine so that thyroid hormone synthesis cannot proceed. This surprising effect of iodine on the thyroid gland is no better understood than is the mode of action of antithyroid drugs with similar effect. Experimentally thiocyanate, which blocks the iodine trap, allows the thyroid hormone synthesis to proceed normally despite the high plasma iodine¹⁰ which would otherwise inhibit organic binding. The second effect of pharmacologic doses of iodine on the thyroid gland is inhibition of release of thyroid hormone; this occurs rapidly within 24 hours after administration of iodine. It may be shown by a sudden fall in the rate of disappearance of radioactive iodine from the gland at the time of iodine administration provided the antithyroid drug is also given to prevent released iodine from reentering the gland. The mechanism of this effect is also unknown. Toshimasa Onaya et al.¹⁴ believe that this effect is produced by inhibition of thyrotropin in its effect on releasing the thyroid hormone. These effects are temporary, and the levels of hormone rise again after about two to four weeks in spite of continued therapy with iodine. This is called the escape phenomenon. The dose of iodine varies with individual patients.¹⁰ Organic iodides are not useful since the amount of available inorganic iodine is unpredictable.

Antithyroid drugs should be started together with the iodine. Thiocyanates should be avoided because of the above-mentioned effect. Methimazole (Tapazole®) is used more often than propylthiouracil, though both are equally effective. Tapazole® has a quicker action.

Patients with hyperthyroidism have increased sensitivity to circulating catecholamines. Tachycardia, atrial fibrillation, and tremors are probably a result of this increased sensitivity. The drugs guanethidine and reserpine have proved to be very effective for these conditions. Other adrenergic

TABLE 1.

Date	Case	Age	Sex	Marital Status	Race	Previously Diagnosed	Precipitating Factors	Diagnosis	Therapy	Complications	Definitive Therapy	Outcome
8/10/66	DE	63	M	M	N	Suspected	Unknown	Graves Disease	Reserpine Bedrest Oxygen Tapazol	Atrial fibrillation and Cong. Cardiac failure	RAI therapy	Improved
10/26/66	RR	19	M	S	W	Hyperthyroidism	Withdrawal of propyl Thiouracil	Graves Disease	Bedrest Sedation Tapazol	None	Planned for surgery—went to his private Doctor	Improved
12/24/66	EM	49	F	D	W	No	Unknown	Graves Disease	Oxygen Bedrest NaI, reserpine, Tapazol, Digitalis, diuretics, cooling, Insulin	Atrial fibrillation congestive heart failure, overt diabetes-mellitus	RAI therapy	Improved heart-sinus rhythm, diabetes under control without Insulin
/21/67	GG	15	F	S	N	No	Streptococcal sore throat	Graves Disease	Bedrest, Cooling, Oxygen, Antibiotics, Digitalis, Diuretics, NaI, Reserpine, Tapazol, Decadron	Renal failure, congestive heart failure	On anti-thyroid drugs with good control	Improved
9/14/67	CI	23	F	D	N	No	Unknown	Graves Disease	Bedrest, Sedation, Tapazol	None	On anti-thyroid drugs — decided for elective surgery	Improved

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blocking agents may be used, but not peroperatively since they may abolish the normal cardiovascular response to anesthesia and cause serious cardiac arrhythmias and hypotension.

Standard treatment includes bedrest and maintenance of hydration and electrolyte balance. Monitoring of the central venous pressure is desirable to avoid congestive heart failure. Other measures include adequate nourishment, treatment of infection with antibiotics, control of fever with salicylates or hypothermia blanket, and treatment of congestive heart failure with digitalis and diuretics. Hypoxia, diarrhea, and acute renal failure require appropriate management. Steroid administration is now routine in critically ill patients. This is based on a theory of relative adrenal insufficiency, but evidence for this is lacking. Favorable results, however, have been observed. Steroids also inhibit thyroid hormone release, produce an antipyretic effect, and may also suppress the long-acting thyroid stimulator which is responsible for hyperthyroidism in Graves' disease. Its use for this latter purpose appears rational. Following control of the emergency situation, attention should be directed to producing a euthyroid state. Definitive therapy with RAI in older patients and surgery in the young is undertaken as indicated. Some patients may be retained on antithyroid drugs.

SUMMARY

Thyroid crisis is an acute exacerbation of hyperthyroidism. The diagnosis is clinical. The disorder is characterized by markedly exaggerated symptoms of hyperthyroidism accompanied by fever of over 100° F. without other evident cause of fever. Good pre- and post-operative management has reduced post-thyroidectomy crisis to a rarity. Advanced civilization and improved medical care have furthered the early diagnosis and treatment of hyperthyroidism with consequent lessened incidence of thyroid crisis. In this 250-bed hospital, forty cases of hyperthyroidism were admitted during the five year period of 1963 to 1967, inclusive. During this same period five cases of thyroid crisis were admitted. It is interesting that in fact all five cases were seen during the years 1966 and 1967. This is a large incidence for a hospital of this size. This is probably because the patient population is of a lower socio-economic status with poor education and inadequate medical care.

In four of the five patients in crisis there had been no previous diagnosis of Graves' disease. Two of the five were under the age of 20 years, although thyroid crisis is not commonly reported in patients of this age. One of the five patients suffered with mongolism, congenital heart disease, and a monoclonal gammopathy. Phophylaxis and treatment are discussed.

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EMERGENCY MEDICAL SERVICES IN RHODE ISLAND

Yearly Surveys Show Substantial Progress In Organization

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I. EMERGENCY MEDICAL SERVICES*

For decades the "emergency" facilities of most hospitals have consisted only of "accident rooms," poorly equipped, inadequately manned, and ordinarily used for limited numbers of seriously ill persons or for charity victims of disease or injury. Very few hospitals have met the needs imposed since World War II for the vast expansion of facilities, equipment, and personnel demanded by society, poor and rich, for routine off-hour treatment of non-emergency conditions and of the steadily increasing numbers of accidental injuries. Society now looks to the hospital emergency department as a community center for outpatient care. More than two thirds of the 40,000,000 "emergency room" visits in 1966 cannot be classified as emergencies. Past and projected estimates of this increasing load are as follows:

Year	Estimated Emergency Room Visits (in millions)
1958	18.0
1960	23.0
1962	28.5
1968	44.1
1970	49.3

This social change has been paralleled by a decrease in the number of house calls and by more adherence to physicians' regular office hours. The function of an emergency department is to give adequate appraisal and initial treatment or advice to any person who considers himself acutely ill or injured and presents himself at the emergency department door. This should assume the probability of obtaining care of the highest order.

A review of ambulance services in the United States indicates a paucity of information and a limited framework for the collection of data on and evaluation of current ambulance services. Research aimed at improvement of these services is equally limited. The available information shows a diversity of standards, which are often low, frequent use of unnecessarily expensive and usually ill-designed equipment, and generally inadequate supplies.

There are no generally accepted standards for the competence of training of ambulance attend-

ants. Attendants range from unschooled apprentices lacking training in elementary first aid to poorly paid employees, public-spirited volunteers, and specially trained full-time personnel of fire, police, or commercial ambulance companies. Certification or licensure of attendants is a rarity. In a recent survey it was found that over 48 different courses of instruction are provided with at least a score of different books and brochures being used as texts. There is no standard or uniformity in these courses, though the standard and advanced Red Cross courses are prerequisites for most. There is need for delineation of a standard course of instruction, a more generally acceptable text, and training aids to ensure training beyond that of the Red Cross Program in first aid.

In the spring of 1966 Doctor Joseph E. Cannon, state director of health in Rhode Island, appointed a citizens' advisory committee with the title "Emergency Medical Services Advisory Committee." There were eleven members. The chairman was T. Dawson Brown, who is chairman of the Board of the Industrial National Bank in Providence. The other members had many and varied backgrounds. Three members had many years of experience in the rescue field, two members from the Rhode Island Bar Association, one member from the Council of Community Services, the president of the Rhode Island Medical Society, a member of the Hospital Association of Rhode Island, a member of the governor's conference on rescue and disaster, a member representing Blue Cross and Blue Shield, and a member of the governor's council on highway safety.

The purpose of the advisory committee was to approve or disapprove our planned program and to render guidance to the project coordinator. Mr. Tom Brown, Public Health Advisor, Accident Prevention Program, worked with us during the initial survey. Now Mr. Richard Bohn more recently took over his duties.

Subcommittees consisting of local experts were formed to explore further the problem areas uncovered in this survey. The subcommittee will, in turn, suggest action programs to the advisory committee for each specific problem area. Programming will then be carried out based on these recommendations.

(Continued on next page)

*Presented at the Rhode Island Statewide Conference on "The Emergency Patient: Cooperation For Effective Care," February 17, 1968

PURPOSE

The purpose of the *Emergency Medical Services Project* in Rhode Island is as follows:

- a. Measure the availability and adequacy of emergency medical services. This will include volunteer and paid rescue squads, volunteer and commercial ambulance services, and hospital emergency units.
- b. Identify problem areas in individual units and the statewide system.
- c. Develop standards to be used as guides by all units.
- d. Design programs to assist services to reach their highest operational capabilities.
- e. Motivate rather than regulate.

It was hoped that the survey would *stimulate improvements* by drawing attention to those responsible for the existing conditions. Hence, the survey may be used as a basis to design and develop programs which will result in the upgrading of all emergency care services in the state.

The dictum that an ambulance should deliver a patient to the nearest emergency unit is no longer acceptable. The patient must be transported to the emergency department best prepared for his particular problem. In the absence of a descriptive categorization of the level of care that might reasonably be expected at a facility, neither the patient nor the ambulance driver can judge which facility is adequate to the immediate need. It is usually taken for granted by the general public that every emergency room can render full care for injuries of all magnitudes. There is the obligation to the severely injured patient as well as to the lone physician, to the small staffs of remote hospitals, and to institutions with minimal emergency department facilities that the public be thoroughly informed of the extent of care that can be administered at emergency departments of varying levels of competence. A categorization of emergency departments would serve to indicate the level of care that a patient might reasonably expect. It is essential that road maps, and road signs at appropriate locations designate routes to the hospitals and emergency departments.

Doctor Robert H. Kennedy, director of Field Program, Committee on Trauma, American College of Surgeons, spoke at a workshop in Pittsburgh in November, 1966 on "Standards for Emergency Medical Care in Hospitals" in Allegheny County. He commented that "good hospital facilities, i.e., plant and equipment, do not assure medical care of high quality; however, poor facilities can affect the quality of care by limiting the variety of services, compromising the safety of patients and impairing the efficiency of the staff."

Two-and-a-half years ago, an emergency facilities survey was begun in Rhode Island by Mr. Tom

Brown of the Rhode Island State Department of Health, Mr. William Lang, administrator of Kent County Hospital in Warwick, Rhode Island, and myself representing the Rhode Island Medical Society.

A repeat survey sponsored by the Hospital Association of Rhode Island including members of the Public Health Service and myself was completed about one-and-a-half years ago.

RESULTS OF SURVEY

Seventy-five questions were asked. Some were of a philosophical nature — some very technical, as, for example, how many tracheostomy sets were available in the emergency unit. There were thirteen voluntary, non-profit hospitals in Rhode Island, ranging in bed capacity from 72 to 687. These included one osteopathic hospital, but not the military hospitals at Newport or Quonset N.A.S. The number of emergency unit visits ranged from 2,000 to 49,000 (1967); the average number of visits increased 8.9 per cent (nationally 10 per cent) per year over the past five years. Broken down to the number of patients per day, the range was from 6 to 8 per day to 135 to 140 per day. One of the hospitals in a heavy summer resort area might see 150 patients per month in the winter months and 800 per month during the summer months.

All hospitals stated that they accepted emergency patients whether the problems were serious or minor and were open twenty-four hours a day. Only eight hospitals were operated under the auspices of emergency room committees. However, the majority of the others had planned, or were in the process of establishing, an emergency department committee. Regarding departmental status of emergency units, one hospital (Kent County) indicated that a recommendation had been made that the Board of Trustees elevate the emergency unit to the level of a medical service. Another hospital was considering taking this step in the near future as part of its expansion program in medical education.

Regarding type of personnel working in the emergency department, five of the thirteen hospitals in the state employed student nurses in the emergency department. (These were the hospitals with nursing schools — the students were there mainly to observe.) The majority had licensed practical nurses and orderlies, and 50 per cent had aides of one or another sort. Registered nurses were always present. In 60 per cent of the hospitals, nurses would carry out administrative duties normally performed by the business office (such as receptionist functions and collecting of money). All emergency departments were open twenty-four hours a day. However, upon further questioning, two hospitals (and possibly two

others) admitted closing or locking the doors at night. Upon arrival of a rescue wagon or an ambulance, a bell would be rung. A nursing supervisor on circulating duty would respond to the call. The basic fee for emergency department care ranged from \$3 to \$15, not including a private physician's fee for seeing the patient. Doctor Kennedy emphasizes that the emergency department should not be a "bargain basement." Two hospitals engaged full-time physicians to run the emergency department, while two others were seriously considering doing so. Three hospitals out of thirteen had an overnight ward or holding unit. Patients were held a maximum of twenty-four hours. The fee for this service was variable ranging from an hourly one to a fixed charge for a twenty-four hour stay. Most hospitals followed a procedure gauged to the seriousness of the injury or illness. Following a check of vital signs and general condition, the patient's private physician was called if on the staff; otherwise treatment and disposition were carried out by the emergency unit doctor. While it was well known that the peak load in emergency departments was from 4 p.m. to 11 p.m., the complement of registered nurses was generally heaviest in the morning shift, covering the period 7 a.m. to 3 p.m., or 8 a.m. to 4 p.m. Twelve of the thirteen hospitals indicated that a patient would be seen by a physician within fifteen minutes after arrival. The number of examining rooms and observation tables or litters usually depended upon the size of the hospital. The largest hospital in the state had eleven examining rooms and four-

teen observation tables, while smaller hospitals had as few as two examining rooms and two observation tables.

X-Ray services were available twenty-four hours a day; and a radiologist was available or on call at all hours.

Five hospitals had electrical cardiac defibrillators in the emergency department, while eight had them nearby in the operating room, heart station, or intensive care unit. Whole blood and plasma expanders were available at all times. Nine of thirteen hospitals attempted to complete active immunization against tetanus, but only four of thirteen gave a written record of the immunization. Twelve hospitals had Hyper-Tet® (i.e., hyperimmune gamma globulin) available and used it in preference to anti-tetanus serum. Only two hospitals had a pamphlet available to explain the function and cost of the emergency department. Only two hospitals were prepared to give emergency service to patients suffering from radiation injury and exposure. All hospitals reported that the rescue squads performed superbly in emergency treatment and transporting of patients. Radio communication between hospital and ambulance and hospital and rescue squads was absent except in two instances. Only one hospital at the time of the survey operated its own ambulance service. That institution, Rhode Island Hospital, gave up its ambulance service as of July, 1968.

RECOMMENDATIONS

(A series of 15 recommendations which followed are omitted here since they are repeated in Part II.)

II. PROGRESS REPORT ON EMERGENCY SERVICES*

At the conclusion of the report presented at the statewide conference on "The Emergency Patient: Cooperation For Effective Care" on February 17, 1968, 15 recommendations were listed which were subsequently approved by the Board of Trustees of the Hospital Association of Rhode Island.

I shall restate the 15 recommendations, and discuss what has been the final outcome of these recommendations.

Recommendation No. 1: More emphasis be placed on Emergency Departments by the Joint Commission on Accreditation of Hospitals.

Upon inquiry we found that during each hospital inspection for accreditation, the Emergency Room is evaluated. Not too much emphasis is given to this area. There seems now to be a tightening up of the accreditation process in general. I was able to observe this myself during a recent period of re-accreditation. Through the American Hospital Association there is a program of self-

review available for the various departments in the hospital including the Emergency Department. For those interested, the AHA will provide self-appraisal questionnaires.

Recommendation No. 2: Emergency services must be available twenty-four a day, seven days a week. That they be properly staffed and equipped according to the standards set up by the Committee on Trauma of the American College of Surgeons.

This recommendation was intended to emphasize the need for 24-hour service in the community. During our two statewide surveys of the Emergency Departments of the state in 1967, we found that the majority of the 13 hospitals provided this service. However, at two or three of the smaller outlying hospitals, although they operate 24 hours a day, a bell has to be run, in response to which a nurse, usually a nursing supervisor assigned to the Emergency Room, will answer. Subsequently, a physician on the premises, or on call, is notified.

Recommendation No. 3: Where the patient load is very heavy, a priority system be established. This

(Continued on next page)

*Presented at the second annual workshop and conference on Emergency Medical Service in Rhode Island, March 8, 1969

will allow for better care of those with most urgent problems. Overcrowding and hasty treatment may result unless there is a system for the evaluation of patients according to degree of illness and the establishment of priorities for treatment.

In other words, what is recommended is a triage (or sorting) system. This was adopted as a result of experience during both world wars in initial sorting and priority-labeling of most casualties. It is intended to provide immediate, brief medical evaluation of all incoming patients, determination of the general nature of the problem and the kind of service needed, and appropriate referral. The first hospital to establish such a system was Yale-New Haven Community Hospital (1963). I foresee in the very near future this type of set-up at Rhode Island Hospital.

Unknowingly, this is carried out in all of our hospital emergency units. Triage usually begins with the clerk or receptionist at the front desk. During the initial interview she can see at a glance whether the applicant is acutely ill or not. If he is, the patient is quickly taken to one of the examining rooms to be seen immediately by an intern or physician. The same is true for the rescue worker. Acutely ill patients are immediately brought to an examining area for prompt attention.

Recommendation No. 4: A central communication and dispatch system for the State of Rhode Island, employing such equipment as two-way radio, be established between hospital emergency departments and outside emergency services — police and fire departments; ambulances and rescue units.

"Hot lines" were installed in four voluntary, non-profit hospitals in the city of Providence. This gives the four hospitals (Rhode Island Hospital, Roger Williams General Hospital, St. Joseph's Hospital, and The Miriam Hospital) direct telephone communication with the Providence Fire Department. In addition the "hot lines" permit the four hospitals to have direct inter-hospital telephone communication in case of a city-wide disaster, civil disorder, or other emergency which would require direct communication among the hospitals. The "hot lines" also permit the Providence Fire Department Rescue Squad Division to inform by direct telephone communication one of the hospitals of an extreme emergency case it may be bringing into the Emergency Unit at the hospital.

After some delay progress is finally being made with representatives of the Motorola Company in reference to a state-wide radio communication network. Motorola has agreed to submit to the Hospital Association of Rhode Island a list of written

recommendations pertaining to a radio communications network.

Recommendation No. 5: A committee be set up consisting of emergency personnel (such as physicians, administrators, and nurses) of each emergency department in Rhode Island to meet annually to evaluate emergency department functions and to recommend changes. It was also recommended that this activity be a responsibility of the appropriate committee of the Hospital Association of Rhode Island.

In the fall and winter of 1967-1968 meetings were held by members of the Hospital Association of Rhode Island; Rhode Island Department of Health; U.S. Department of Health, Education and Welfare; R.I. Medical Society; and R.I. Health Facilities Planning Council, for the purpose of setting up a program on Emergency Services and the Emergency Patient. The result was the first conference of its kind to be held in Rhode Island on the Emergency Patient on February 17, 1968. Today's program is the second program to be held in keeping with our recommendation.

Recommendation No. 6 and No. 8 (similar): Rec.

No. 6: Workshops be held twice a year for training of lay personnel engaged in emergency care and transportation of the sick and injured. The Rhode Island Medical Society and the Hospital Association of Rhode Island should sponsor and supervise the training programs for the purpose of standardizing the various aspects of emergency care and transportation of the sick and injured.

Rec. No. 8: A system be established for evaluating the treatment given to each patient brought into the Emergency Unit by the rescue squads. The Hospital Association should be a participant, together with the Medical Society and the Health Department, in sponsoring periodic meetings with the representatives of the ambulance and rescue units to promote jointly good standards of service and personnel training. It is recognized that what happens to the patient at the scene is a crucial element in the emergency care as well as in the outcome of services rendered later at the hospital.

On March 9, 1968, a workshop on Emergency Medical Care was held at Roger Williams General Hospital. The purpose of this workshop was to give some basic fundamentals and principles to the rescue workers of Rhode Island. Volunteer rescue workers and ambulance drivers were included. Three hundred of the approximately nine hundred workers were in attendance.

This conference was sponsored by the Rhode Island Medical Society and the Division of Health Mobilization of the U.S. Public Health Service.

The Committee on Trauma of the American College of Surgeons was represented. Classroom sessions were held on 1. fractures and splinting; 2. psychiatric aspects of emergency casualty-handling; 3. Resuscitation and the use of oxygen; 4. treatment of bleeding injuries; and 5. management of medical emergencies, such as shock, the unconscious patient, and acute poisoning cases. A film on emergency childbirth procedures was shown.

The second workshop for another 300 rescue workers was planned for March 29, 1969, at Roger Williams General Hospital, with a similar format. The Disaster Committee of the Rhode Island Medical Society sponsored the conference, together with the Rhode Island State Department of Health and the U.S. Public Health Service. The Chairman of the AMA Committee on Disaster participated.

Recommendation No. 7: All personnel in hospital emergency units be trained on a continuing basis, including physicians and nurses. (This point is covered in the standards of the American College of Surgeons.) In addition to the conferences described above training within each unit is conducted by the hospital on an informal or formal basis.

Recommendation No. 9: A uniform system be established for tagging by the rescue workers of all persons seen at home, at the scene of the accident, or elsewhere for the purpose of assisting the hospital emergency units in the management of patients. This procedure also provides the rescue unit with a useful permanent record of work done. A pilot program involving five different rescue units from different parts of the state is about ready to begin. A tagging system similar to one used in Columbus, Ohio has been established. Hopefully, after three to six months a permanent statewide tagging system will be established for rescue and ambulance vehicles.

We have not thus far accomplished much with this proposal, but we hope that progress will be made.

How can a variety of individuals who may arrive first at the scene of daily small disasters be expected to conduct a triage program and care adequately for victims of a large disaster when they receive no daily constructive criticism to improve their knowledge? Some type of medical auditing and medical critique is needed.

Recommendation No. 10: The feasibility of helicopter service to transport patients in emergencies, particularly in heavy summer resort areas, be explored with state government and other agencies.

The state is unable to support or finance such a program. The cost would be prohibitive. It would cost about \$200,000 a year to keep and maintain

one helicopter. Inquiry at the Quonset Naval Air Station brought a negative response. They are unable to spare a helicopter. When the war in Vietnam is ended, there is expected to be a surplus of helicopters and pilots.

Recommendation No. 11: Emergency units be organized on a departmental basis with a single director. Each hospital should recognize that trauma services need proper recognition both in the medical staff structure and in the administrative organization of the hospital. One element of this organization is an emergency department committee representing the medical staff, nursing service, and hospital administration to formulate policy.

Most, if not all, hospitals now have an active, working Emergency Room Committee. At Rhode Island Hospital the Emergency Room Committee has been expanded to include a member of the nursing service; a hospital administrator; and members of the medical, surgical, orthopedic, and neurosurgical departments.

Recommendation No. 12: Personnel and equipment equal to or interchangeable with that of the intensive care unit be provided in the hospital emergency unit.

This recommendation appears to be generally acceptable.

Recommendation No. 13: The Rhode Island Department of Health establish a Division of Emergency Health Services to coordinate and combine where feasible programs within the state that are similar in nature.

It is desirable that the State Coordinator for Emergency Medical Services be hired on a permanent basis. It is not desirable that, just as an individual settles down and has matters under control, he be transferred, or leave for another position.

Recommendation No. 14: The placement of signs on the state highways and city roads be reviewed and new signs be installed as necessary to designate clearly the exits and directions to the various hospitals and emergency units. These markers should be the joint responsibility of the hospitals and state and municipal governments.

Slow progress is being made in this project. A questionnaire has been mailed by the Hospital Association of Rhode Island to all hospitals regarding the placement and installation of signs on highways or city streets. The results of the survey will be reported to the Civilian Task Force Committee dealing with Emergency Services.

Recommendation No. 15: A hospital, having established a system under which patients in the emergency unit are classified according to na-

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ture and priority of treatment required, study and pursue alternatives for caring for the non-emergency patient elsewhere than in the emergency unit.

The conference programs of last year and this year and many of the recommendations contained in this report can be credited to the Emergency Medical Services Advisory Committee. This advisory committee is one of only five in the country at the time of this report.

As a result of the efforts of this group, Rhode Island was among the first three states to complete adequate surveys of ambulance services and emergency departments.

During the past year great progress has been made, but certain problems still remain unsolved. The city of Providence has been zoned into equal sections. The rescue workers within these zones transport emergency cases to the hospital in the zone. A patient is no longer transported past two or three hospitals in order to reach the one of his choice. Rescue calls have been reduced, and as a result better service is being given. The hospitals in the zoned area are: Rhode Island Hospital, Roger Williams General Hospital, St. Joseph's Hospital, and The Miriam Hospital. Simple transportation is no longer provided. The handling of "dead on arrival" cases is still under discussion. Another problem has to do with the rescue squad arriving at the home of a critically-ill patient, and finding that the patient's doctor is not on the staff of the hospital in that zone. Where waiting for an ambulance is deemed inadvisable, what should one do?

This problem has been discussed with appropriate committees of the Providence Medical Association and with members of the Providence Rescue Squad. It has been agreed that if the doctor is at the home of his patient, the rescue squad will take the patient to the hospital where the doctor has staff privileges, even if this involves bypassing another hospital within the zone. This procedure is followed only if the doctor follows the patient directly to the hospital or rides in the rescue vehicle accompanying his patient.

PROPOSALS FOR THE FUTURE

1. *Explorations concerning a course on "Emergency Care of the Sick and Injured" for rescue workers, and medical and paramedical personnel concerned with emergency services.* Rhode Island Junior College has expressed interest in offering a 10-week course. This should be pursued.

2. *State League for Rescue Workers be formed with the Superintendent of Fire Alarms for the Providence Fire Department as its Director.* Thus, a spokesman from the uniformed forces will be available when important considerations pertaining to rescue work and emergency services arise. Rescue workers, volunteer rescue workers and all am-

bulance drivers and attendants should have advanced First Aid certification, and also demonstrate competence in: 1. cardiac-pulmonary resuscitation, 2. transportation of the emotionally disturbed, and 3. emergency childbirth.

Since this suggestion was originally made, a meeting was held on February 19, 1969 in Providence for the purpose of organizing a statewide group of emergency medical services personnel. This organization will maintain and improve standards in training and operation of the state's various ambulance and rescue services, and will be similar to our proposed State League for Rescue workers. The exact role of the medical and nursing professions relative to first aid has been a perennial question. What part does the emergency department play in teaching or improving the layman's first aid care? Why is first aid usually taught in a non-medical facility and not at the local hospital where casualties arrive? We propose that the state league for rescue workers, however designated, establish a program to permit training of and observation by rescue workers in some of our emergency rooms in the state on a continuing basis.

3. *Investigation of the feasibility and practicality of establishing a mobile medical team at one of our large general hospitals to be dispatched by the emergency department to a scene of a major disaster.*

4. *Certification of ambulance personnel.* An ambulance requires at least two people, a driver and an attendant. Both should have completed an American Red Cross Advanced First Aid Course and a further course given by physicians, should carry a current valid certificate, and be licensed by the Health Department. A certificate should not be issued for more than 1 to 3 years. This was considered at a recent meeting of the Rhode Island Medical Society Disaster Committee. It was suggested that a 10-hour course on various emergency situations be instituted in each county by local physicians with the agenda set up and supervised by the Disaster Committee.

5. *Standards for emergency services under hospital licensure.* A number of meetings were held by a technical subcommittee on emergency services during 1968 specifically to set up regulations for emergency service for hospital licensure and certification in Rhode Island. This was presented to a task force and was accepted. Before final codification, a public hearing will be held. Similar licensure proposals were established for hospital pharmacies and central supply. I believe the proposals are sound and will improve further the standards of the various emergency rooms in Rhode Island.

6. *The American Telephone and Telegraph*

Company (A.T.&T.) provide "911" as a nationwide emergency number for use by public safety agencies in the community it services. A.T.&T. has active plans in this regard. Calls to "911" are intended to provide the public direct access to an emergency switchboard operated and manned by public safety agencies. A universal emergency number was among the recommendations of the President's Commission on Law Enforcement, and has been supported by several members of Congress. The Federal Communications Commission has also been active for some time in urging the advantages of a single easy-to-remember number. It is expected that complete nationwide introduction of the "911" number will take several years. Estimated cost is more than \$50 million.

The establishment of the universal emergency number is not expected to cause an increase in individual's telephone bill. Mr. Allen Mortimer, General Sales Manager of the American Telephone and Telegraph Company in New England, said "We're offering this number in response to the expressed public need for an easy-to-remember, three-digit number they can use in calling police, fire or other emergency help. England uses a similar number for this purpose, '999,' and it is working fine."

CONCLUSIONS

The hospital of today is the traditional center of support for a community's emergency medical services. Since the emergency department is logically the focal point of coordinated emergency service, in a community this unit must be prepared to expand responsibilities, personnel, and facilities when community disasters appear. However, expansion fails to develop logically when coordination, communication, and counseling programs with both internal and external emergency services are not already a matter of policy on a daily basis.

The hospitals in the state, but more particularly the medical and paramedical personnel who operate the emergency rooms and services, have contributed greatly to the progress through their efforts and interest.



MEDICAL EDUCATION

(Continued from Page 499)

TWO TYPES OF DOCTORS

I am suggesting that in medical practice we are moving to the situation where there will develop but two broad types of doctor: the one skilled in techniques and procedures — the specialist — with his more narrowly based subspecialist colleagues; the other skilled in the care of patients — the generalist. The increasing cost and sophistica-

tion of the techniques and procedures demands that they be centered and used in hospital. Yet not every patient in hospital will require them, nor will those who do so require them all the time they are in hospital. The generalist may thus function both in the hospital and in the community. It will be the task of the educators to produce a scientifically trained and practicing generalist. He may be developed from many different sources.

Another feature of medical schools in so many countries is that, in making appointments to teaching hospitals, the last quality required or looked for is the capacity to teach. At a time when we are spending enormous sums on training teachers for schools, we neither offer nor require any training in teaching for University staff. Because good teaching is based primarily on competence in the subject and an enthusiasm to transmit this competence, the motivation of most clinical teachers is such that they will very quickly master and learn to select such teaching methods and aids as they discover to be relevant to their teaching situations. One cannot but believe that it is this lack of professionalism in our University profession of teaching which is responsible in some part for student unrest. In the expensive once-and-for-all educational situation of the student he has a right to expect that he be well taught. While the differential between the best and the worst is great, there seems no doubt that medicine is not as well taught as it might be in medical schools in many countries.

You may forgive me introducing a personal note. The first task undertaken on arrival at the University three years ago was to go along to the Department of Education and say "It appears that I am going to teach — please tell me how I may learn to do so." In September this year we will hold our fifth course for general practice teachers.⁷ All the general practitioner teachers — 80 of them — have attended one or more courses. These are now being held for such teachers in many other parts of the United Kingdom,⁸ in Australia, Canada, and no doubt elsewhere.

NEED FOR MORE TEACHERS

Your country is increasing the number of medical schools from 88 in 1966 to 100 or so at the present time. We are to have in the United Kingdom, 3,500 medical undergraduates in the first year in 1975. This year we have 2,600 while in 1965 we had 2,000 — the same number which we had in 1939. New medical schools regularly arrive in India and in the new African nations. In Newfoundland a new medical school will at first use as its teachers existing practitioners — mostly generalists. In Hammerfest in Norway a new school

(Continued on next page)

is commencing operations based on general practice.

All these new schools and the expansion of existing ones mean the provision of more teachers. The major source of supply will be from those already engaged in practice.⁹ The clinician experienced in service has achieved a self-created system of temporal compression of thought processes in order to make daily a long series of decisions, some of which become almost intuitive. In the new situation of academic combined with service life, it becomes necessary to reverse this process, to expand in time thought processes leading to decisions so that the steps taken by the mature clinician may be verbalised and understood by the less experienced student. Forgetting too, planned or accidental, has to be re-adjusted so that one may readily recall sources, alternatives previously discarded, or material associated with other disciplines. Surprisingly, one finds the service situation more satisfying, its results improved by more careful, clearly intellectual decision-making.

PROGRAM AT MANCHESTER

In my department we have been given adequate funds to attempt to evaluate our three year postgraduate training programs for up to 100 prospective general practitioners. The programs are a package deal with teaching both in hospital and in selected teaching practices. Four University centers other than our own are involved in using our methods of evaluation. We are endeavoring to measure the changes we may effect in those taught in terms of knowledge, skills, and attitudes. We have defined what we believe to be the "cores" in these areas. We have started to devise tests for use and have created a test-bed of the 80 teachers which we will use to refine and validate the test material before ever it is employed in the real situations of training. We hope that we may discover whether any one or more of the differing programs offered appears superior to others. We may be enabled also to give better career advice and to direct individuals to a particular type of course for rational reasons.

The first year of undergraduates have themselves expressed a willingness, almost a desire, to subject themselves to attitude testing, and this we are to commence shortly. We then have an opportunity to observe the changes, and perhaps detect their causes, which occur in individuals during the planned progression of education in the undergraduate and postgraduate training years. We would hope to be allowed to continue this work when the young people are themselves in service. My department is in the almost unique situation of being formally charged by the University with a substantial undergraduate program and the postgraduate training of those graduates — about half

— who wish to enter general practice. Those who are to practice as generalists do not require such considerable depth of medical science as it is fashionable to give them. I believe that it is possible for a general practitioner adequately to manage his diabetics, while at the same time feeling that Krebs cycle is an inferior form of Lambretta. When presented with a young married woman complaining of frigidity, he should not twitch nervously and reach for the phone to refer her to the nearest psychiatrist, but should be competent to evaluate and cope with the problem himself. He should, moreover, be such a person as a young married woman would be happy to consult on such a matter.

POSTGRADUATE TRAINING IN UNITED KINGDOM

The whole system of postgraduate training in the United Kingdom is being overhauled — not before time, because it seemed that one of the more valid reasons for emigration was the lack of planned residency programs such as you have had for so long. A Central Committee, which is shortly to become a statutory Central Council, is being supported by a regional organisation; and the machinery for fulfilling our educational objectives is in a fair way to being created. The Ministry of Health has accepted its responsibility to fund this organizational machinery as it has for some time handsomely funded so many courses and postgraduate centers.

The creation of the machinery is one thing, but each country which is expanding its output of undergraduates is expanding also its teaching load in postgraduate training and in continuing education. Certainly in my own country, the consultants who are most usually involved in all forms of postgraduate teaching are becoming increasingly concerned at the new demands made on their time.

If we are to sustain these increased teaching loads, we must seek to create a new body of teachers from in-service physicians. They should be selected for their enthusiasm and competence to teach irrespective of their discipline. They will in many instances need financial support which will at least compensate them for loss of earnings. For time spent in teaching, particularly in preparation and in evaluation, is all time not spent in practice. They will need to be further supported by various ancillary and audio-visual aids, and training in their use, while the need in most countries for the creation of a central postgraduate organisation is quite apparent.

NEED TO EVALUATE POSTGRADUATE TEACHING

Little has been done to evaluate postgraduate teaching objectively. Continuing education has been in most countries amateurish and haphazard.

(Continued on Page 518)

EDUCATION FOR GENERAL PRACTICE

Published elsewhere in this issue is a charming and scholarly essay by Doctor Patrick Byrne of the University of Manchester in England on the training of the general practitioner and his need for continuing education. As Doctor Byrne conceives the problem, it is of world-wide concern.

In this connection two items from the JAMA of 75 years ago (the issue of June 30, 1894) are revealing. President Charles Eliot of Harvard and Doctor J. Collins Warren of the Massachusetts General Hospital bespeak the urgent need for better education for all doctors, not least for the country doctor, the analogue of today's general practitioner or "family practice" specialist. In the second of the two items an earthy fellow from the provinces takes to task those "idealists" from the Athens of America:

Education of the Country Doctor. — In responding to the toast "Harvard University," at the annual dinner of the Massachusetts Medical Society, following its one hundred and thirteenth meeting, President Eliot said that, in looking back over the last twenty-five years, nothing was more clearly marked than the progress in professional education and in this medicine has taken the lead. There has been more gain in the education of physicians and surgeons than in any other department of the University. He had often felt the wish that medical schools in general, and those of Massachusetts in particular, were producing more country doctors. The country doctor should be given a

chief place. He needs a better education than the city doctor. He has no specialist at his elbow. He must know himself, and act himself. The training of the country doctors is most important and needs to be developed, for he is more than a physician; he is a missionary; he is a social reformer — a sanitary reformer. He brings to his community the scientific spirit — a most valuable and important thing. The country doctor has one immense privilege and great happiness for his comparative isolation — that of living in the country — an inestimable prize for himself and for his family, as one who, from long observation of whence the most promising students come, can testify.

Ideal Standards of Medical Education. — There are indications of a reaction against the exactions of the idealists in medical education. In a discussion at one of the sessions of the recent Congress of American Physicians and Surgeons, Dr. J. Collins Warren, of the Harvard Medical School, advocated a thorough preparatory education of the student before entering a lecture room, so that he should have the A.B. degree, requiring four years; then four years in a medical school, one year in hospital and one abroad to finish his studies — making ten years in all. Dr. P. S. Connor of Cincinnati argued that it would be unjust to insist upon all students that they should first be in possession of the A.B. degree, then, possibly have to practice at some country cross-roads where the people around were unable to speak a single sentence correctly.

PROOFREADER'S PROSTATITIS

In a recent issue of our esteemed contemporary, The New England Journal of Medicine, a correspondent in California reported a hitherto unrecognized occupational disorder. The patient was a divorced 38-year old man who had been employed as a proofreader most of his working life. His past history was not significant. Current complaints were urinary frequency and a seminal discharge of a few weeks' duration. The discharge, he state, resembled "that which follows sexual intercourse." Examination revealed a large boggy prostate and a prostatic discharge containing significant numbers of pus cells.

Further questioning elicited the curious fact that the difficulty began during a time when the patient was continuously occupied proofreading ma-

terial such as is often termed, according to the writer, "salacious." The patient expressed it this way: "I was always turned on." The reading matter to which he was exposed is sold "freely and openly" in California. Certain advertising copy which reaches Rhode Island by mail from California indicates that the characterization "salacious" is somewhat of an understatement.

The author asks whether he should consider the illness an industrial accident or ascribe it to personal hypersensitivity. We shall leave that decision to some Solomon on the Workmen's Compensation Commission.

We are not sure whether we should sympathize with or be awed by this impressionable individual who can be "turned on" by pictures.

HEPATITIS PRECAUTIONS

To contract infectious hepatitis one must ingest contaminated feces, a mode of infection with subtleties that may not be immediately apparent. Fomites, defined as "inanimate objects or materials on which disease-producing agents may be conveyed," is a word as old as the Latin language.* Traditionally it refers to such items as apparel, bed clothes, and dishes. That faucet handles are fomites is seldom recognized. Hands contaminated in cleansing the anus following a bowel movement turn on the water faucet. Unless the faucet itself is thoroughly washed, it is quite possible that the next person using it will pick up contaminated feces on his hands.

As a hygienic measure we should perhaps all develop the habit of filling wash basins before the act of defecation, and avoiding all intermediate objects until we have cleansed our hands. Of course the use of foot, knee, and arm devices for controlling the water source is logical and reasonable, but since such controls are not widely available we must come to terms with things as they are.

Guidelines for the control of infectious hepatitis have recently been published in the weekly newsletter of the Communicable Disease Division of the Rhode Island State Department of Health. They are reasonable and full of good sense. Their essence is that in both home and hospital contact with fomites should be avoided. They did not include the simple expedient of filling a wash basin before a bowel movement; we hope that they will add this to their list of recommendations in the future. For control of the spread of infectious

*Fomes, fomitis (L). Fomites is plural. Def. kindling wood, torch-wood, tinder.

hepatitis in the home, they recommend the use of disposable eating utensils, which are now so common as to present no problem in logistics. With modern technology we may hope that there will soon be available disposable pajama bottoms (paper dresses are now rather commonplace). The use of modern detergents and thorough agitation in home washing machines reduces greatly the likelihood of clothes acting as fomites.

Sensible rules for the management of hepatitis patients in the hospital are highly desirable. Such patients have long been neglected because of the extensive ritualistic quarantine thought necessary before the practical consideration of the control of contaminated feces and hypodermic needles was thoroughly understood. Thomas Chalmers, an authority in the field of hepatitis, has often stated that it is shocking that the care of a patient with infectious hepatitis should be different from that of other patients. It is inexcusable and in any case inadmissible for the excreta of a hospital patient to find its way to the mouths of other patients. Nevertheless, it is important to use extra care in handling the stools of patients with infectious hepatitis. One of the easiest methods of accomplishing this goal is through plastic gloves by all persons examining or handling the patient or his excreta. Since we are currently in the midst of a mild epidemic of infectious hepatitis these matters are of immediate concern. For the many patients treated both at home and in the hospital who may have been slighted in the past because of the psychological barrier of donning gown and mask, the advice of the Communicable Disease Division of the Rhode Island State Department of Health is extremely valuable and timely.

SOCIALIZED MEDICINE ITALIAN STYLE

A droll story appeared in an Italian weekly some time ago, apparently not fictional:

A prominent man asked his *Medico della mutua* (a physician in the pay of the government in a system of socialized medicine) to write a prescription for a certain medicine. The doctor happened to be a *rara avis*, a conscientious one. He refused to write a prescription without visiting the patient. The infuriated man told the stupid doctor that all he wanted from him was a prescription. If he wanted an examination he would go to "Professor so-and-so." Unable to get what he wanted he fell into a fit of rage and ended up in a hospital with a heart attack. The wife called the *rara avis* on the phone: "You fool, you caused my husband's heart attack."

Recently a film *Il medico della mutua* was made from a novel of the same name. It ridicules à la Molière this particular group of physicians. In the film a doctor is having an affair with the wife of a moribund colleague with the object of inheriting

his clients. Letters to the editor appeared in the same weekly expressing surprise that no doctor had started a suit against the producer. It has been said that the film will amuse 45 million persons, this being the number entitled to and receiving free government medical care in Italy.

Apparently, these insured Italians can be bought by a physician interested in playing this evidently profitable game. The joke is that the public (45 million insured) laugh and condone and cooperate, with the ultimate object and pleasure of cheating the government. The physician, usually low-grade, is guilty of cheating his employer (the government) and of degrading his profession. Apparently the system favors the unscrupulous physician (the clients being procured and bought in a kind of market), and the physician is at the mercy of his patients, who can discharge him at will if, for instance, he refuses prescriptions or tests considered unnecessary.

FRANCESCO RONCHESE, M.D.

VIET NAM VOLUNTEERS

Martha Raye does it. Ann-Margret does it. Miss World does it, too, and then there's the eye-boggling Raquel Welch — all earning well-deserved international publicity because they do it so well. They take their talents to Viet Nam to entertain the armed forces.

Not so curvaceous and entertaining as these stars, and certainly less heralded, are the 580 physicians who have during the past four years as Volunteer Physicians for Viet Nam made the trip — some more than once — to give their services to care for the Vietnamese civilian population.

In fact, expressions of appreciation to these selfless physicians is mighty scarce in the press; and perhaps only their families, colleagues, and home-town patients are aware of the sacrifices they have made to help those impoverished people in a distressed land half-way around the world.

Ironically, newspapers and other media recently have reported at length on a few physicians who are allegedly "cleaning up" through the "largesse" of Medicare, Medicaid, and other governmental welfare programs.

A better balanced view would indeed call attention to the American physicians who are "cleaning up" in Viet Nam — on \$10 a day expense allowance — by treating the country's prevalent diseases: tuberculosis, intestinal parasitism, typhoid fever, bacillary and amebic dysentery, cholera, malaria, smallpox, leprosy, tetanus, rabies, meningitis, pneumonia, trachoma, beriberi, goiter, night blindness, nutritional disorders, and cases of ringworm, tapeworm, and Oriental flukes. Now added to this burdensome challenge are the war-related injuries, for which surgeons are urgently needed.

The dedication of these civilian physicians is notable. As of June 30, 580 doctors from 49 states, the District of Columbia, and the Canal Zone have volunteered or have already completed a minimum of 60 days in Viet Nam; of these, 60 returned to serve two or more tours of duty.

The AMA has administered the program since 1966 at the invitation of the U.S. State Department's Agency for International Development. While highly successful thus far, the program has an urgent need for more M.D. volunteers. Twenty-five years of war and insurrection have placed tremendous burdens upon the people of South Viet Nam. War injuries, disruption of public health measures, and a drain of medical and paramedical manpower into military service have been superimposed on the long established major problems of endemic disease and malnutrition. Approximately 50,000 civilians are treated each year for war-related injuries caused by mines, booby traps, small arms fire, air and artillery bombardment, and Viet Cong terrorism.

For a native population of approximately 17,000,000, the country has only about 25,000 hospital beds and only 1,000 Vietnamese physicians, of whom about 700 are serving in the military. The disparity between the needs of the population and the shrinking supply of medical manpower has obviously reached emergency proportions. American volunteer physicians have helped alleviate the distress, but the crisis is nowhere near resolved.

The AMA must recruit 32 volunteers every two months to keep hospital staffs at full strength. General practitioners, general surgeons, internists, ophthalmologists, orthopedic surgeons, pediatricians, and preventive medicine specialists are needed, with especially great demand for general and orthopedic surgeons to treat war-related civilian casualties. All types of specialists are needed, however, and the AMA welcomes all inquiries, including those from women physicians. In their 60 day tours of duty in civilian provincial hospitals, the volunteers work with teams of U.S. military physicians or with volunteer surgical teams from other nations. Transportation, housing, insurance, and other expenses are provided. Applications for volunteer service are available upon request.

AMCAS

On July 1 the Association of American Medical Colleges (AAMC) will initiate a pilot program of the American Medical College Application Service (AMCAS) with seven medical schools participating. Under the plan a student will submit only one application and one set of transcripts to AMCAS for any or all participating schools to which he applies.

AMCAS will summarize and validate all records and distribute them to participating schools selected by the student. AMCAS will act solely as an application service and will not render admissions decisions or participate in such decisions. There will be a modest fee to defray cost. By next

year the service will be offered to all American medical colleges for the first time, and it is hoped that all will participate.

This is a welcome development and will simplify tremendously the problem of the student who must in self-protection apply to a number of schools, and will also reduce significantly the expense to him and to his college or university. It seems now that a medical school matching plan similar to the successful intern matching plan would be the next order of business. In the meantime this intelligent and reasonable development deserves wide participation and every success.

(Continued on next page)

NEW MEDICAID REGULATION

On June 30, 1969, Secretary of Health, Education, and Welfare Robert H. Finch announced a new regulation limiting fees paid to physicians, dentists, and other individual providers of medical services under Medicaid. The announcement stated in part:

"The HEW regulation will limit payments to providers participating in State Medicaid programs to those received in January, 1969, unless payments are below the 75th percentile of customary charges.

"The Department's action on fees becomes effective July 1, 1969, and remains in effect until July 1, 1970. . . .

"States whose payment structures provided payments below the 75th percentile of customary charges on January 1, 1969, may request permission from the Secretary of Health, Education, and Welfare to raise payments to that level.

"States whose payment structures provided fees above the 75th percentile of customary charges must adjust their payments so that they do not exceed reasonable charges as determined under Title XVIII-B of the Social Security Act (Medicare).

"After July 1, 1970, States may request permission to increase fees paid to physicians and dentist only if two conditions are met:

(1) The average percentage increase requested above the 75th percentile of customary charges on January 1, 1969, may not exceed the percentage increase in the all-services component of the Consumer Price Index (adjusted to exclude the medical component) or in an alternate index designated

by the Secretary of Health, Education, and Welfare.

(2) Evidence must be clear that the providers and the States have cooperatively established effective utilization review and quality control systems.

"Regardless of which payment level was in effect in FY 1970, in a given State, the 75th percentile of customary charges will provide the floor above which allowable CPI increases will be measured.

"The new regulation requires States to revise their State Medicaid plans to include descriptions and details of their payment structures. A State that wishes to revise its payment structure for practitioners' services or change the payments authorized under it may not do so until the proposed changes have been approved by the Secretary of Health, Education, and Welfare or his representative. . . .

"The new regulation implements Secretary Finch's decision to set Federal standards for vendor payments to physicians, dentists, and other medical practitioners to control escalating Federal and State expenditures for the program."

The Rhode Island State Department of Social Welfare is now paying Title 19 medical bills on the basis of Plan B of Rhode Island Blue Shield. This is consistent with the new HEW guidelines, which therefore will not affect Rhode Island physicians significantly. While the local Social Welfare Department has at times seemed unduly parsimonious, its overall good judgment and fiscal caution has resulted in an unusually successful Medicaid program.

CHIROPRACTORS AND X-RAY EXPOSURE

Based on the hazards of improperly used x-rays and radiation, The American College of Radiology warns that the practice of chiropractic "constitutes a dubious benefit to patients who seek health care."

According to a recent resolution approved by the Board of Chancellors and Council of the College, "chiropractic training does not adequately cover the use of ionizing radiation for detecting disease and injury." The College cautions that the

methods of making x-ray exposure discussed in some chiropractic texts are "contrary to the established fundamentals of good radiation safety and sound medical practice."

The public should be widely informed that the American College of Radiology regards the use of radiation by chiropractors as "unwarranted and without likelihood of significant medical gain." This is a danger of chiropractic that receives too little attention.

ACUTE OBSTRUCTIVE SUPPURATIVE CHOLANGITIS

The recent death in a Rhode Island hospital of a patient from septic gram negative shock resulting from acute obstructive suppurative cholangitis provides an opportunity to reemphasize the danger of this insidious disorder.

The clinical diagnosis of cholangitis is suggested by the classical triad of upper abdominal pain, jaundice, and chills and fever first described by Charcot. The obstruction is usually due to biliary calculi.

An occasional patient with cholangitis follows a fulminant course with overwhelming sepsis. Reynolds and Dargan in 1959 recognized that such individuals represent a distinct clinical entity to which they gave the designation acute obstructive cholangitis. The course of these patients was characterized by Charcot's triad with the additional striking features of central nervous system symptoms, shock, and rapidly progressive sepsis.

Glenn and Moody in 1961 reported a series of 8 cases, of whom 5 survived operative decompression of the biliary tract. The other 3 patients, who were not subjected to surgery, succumbed to the disease. The writers point out that the diagnosis may not be difficult when all of the classical signs are present. Elderly patients, however, often fail to show a febrile response commensurate with the disease. The most common organisms are *E. coli*, *Pseudomonas*, streptococcus, *Proteus*, and enterococcus. They emphasize that the primary objective of treatment is decompression by operative drainage of retained pus under pressure within the biliary tree. Definitive surgery should usually be deferred.

Hauptert, et al. in 1967, reported experience with 15 cases. Twelve patients were subjected to emergency laparotomy. One died before surgery could be undertaken. Eleven patients were over 70; ten had temperatures above 103°F. These authors also urge early exploration as a means of reducing mortality in jaundiced patients presenting progressive toxemia.

Hinchey and Couper reported 24 cases with a mortality of 33 per cent. Nineteen of the patients were admitted in shock.

Dow and Lindenauer collected 46 cases from the literature and added 10 of their own. Of the 15 cases previously reported without hypotension and septicemia, 13 survived. Of 31 cases with hypotension and septicemia only 19 survived. But only 8 of the 19 cases had been subjected to surgery. Of the authors' 10 cases, eight were subjected to surgery, of whom 4 survived. Two cases survived without surgery. These statistics give some concept of the forbidding nature of this disease.

The latter authors indicate that, while preoperative supportive therapy is necessary, it should not be carried on for a prolonged interval, since only prompt decompression can reverse the disastrous course of acute obstructive suppurative cholangitis. Patients with this condition are usually refractory to all forms of nonoperative therapy. The operation should be simple and minimal — decompression of the biliary ducts. Modern treatment of septic shock has made considerable progress but still leaves much to be desired. Avoidance of shock by early recognition and prompt operative intervention will save lives.

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MEDICAL EDUCATION

(Continued from Page 512)

The progress of medicine is now too fast for such lack of method to continue to be successful. The necessary education to keep doctors up-to-date is too expensive and important for it not to be evaluated.

In Britain I undertook a regional survey of general practitioners with a similar number of respondents (762) to that in Minnesota,¹⁰ and obtained somewhat similar though much briefer and less elegantly produced results.¹¹ This regional survey is being repeated, improved, on a national basis; and we intend to look in depth into one or two selected regions. We are also undertaking a pilot research project, using a "systems approach" method. This will attempt to identify an area of ignorance, devise teaching to cover the area, and then measure over the succeeding year the effects of the programs. In some of the courses we have organised the participants have been persuaded to submit themselves to "before" and "after" examinations. One 12-hour course for general practitioners was on clinical physiology. The thirty-two members of the course sat an examination on its subject matter at the commencement of the course and at its conclusion. There was a mean 30-percentage improvement.⁸

I have delivered what had been prepared, but in these last two days I have undergone an epochal experience. It does not seem that my remarks are out with his teaching, but my rapt exposure to Doctor Weed has created for him another keen disciple. I am glad to observe that U.V.M. is a garden where Weeds are welcome and valued inhabitants.

Ladies — you have been so very patient. Perhaps you have learned the art of listening from your husbands. I should refer back to the earlier part of this evening, and reflect with Molière that "It is good food and not fine words that keep me alive." You have had no fine words I'm afraid. Merely a mélange of partly-seen problems. The only thing of which I am certain is that in the next few years there will be a lot of fun in seeing so many people coming up with different answers.

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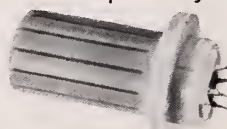


NEANIOLOGY — A NEW PEDIATRIC TERM

According to *Il Nostro Mondo* of January 1969, DeToni, the well-known professor of pediatrics of the University of Genoa, Italy (DeToni-Fanconi syndrome), has proposed a new pediatric branch for the study of adolescent phenomena. He proposes to call it *neaniology*, from the Greek *neanias*, adolescent.

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HERNIATED CERVICAL AND LUMBAR DISCS: CLINICAL FINDINGS AND DIAGNOSTIC PROCEDURES*

Surgery, If Unavoidable, Must Be Directed By Symptoms And Neu- rologic Deficit

Degenerative disc changes occur in every person who lives long enough. Some studies have stated flatly that x-ray evidence of disc disease can be found in everyone over the age of 50 and that such changes can be seen fairly frequently in the third decade. During the process of aging, the nucleus pulposus loses water and the elastic tissue in the annulus decreases.¹ This changes the mechanical features of the disc. The normal watery nucleus bears weight, and the annulus constrains it concentrically. With aging, the annulus, already less elastic, has to bear weight vertically and resist oblique shearing forces. If it gives way, either by thinning out or rupturing completely, the degenerating nucleus may be herniated posteriorly.

In most instances, the aging changes proceed fairly quietly or pass through mildly symptomatic phases that adjust and heal spontaneously. Sometimes, as a result of acute trauma (or of the chronic trauma, or of the chronic trauma called "fair wear and tear"), the process may cause serious symptoms of pain, neurologic deficit, or both.

This paper is concerned with those patients whose degenerative disc disease causes them to seek medical care.

HISTORY AND CLINICAL FINDINGS

History — Analysis of the history begins with the patient's chief complaint, usually pain. A detailed history covering seven major points is necessary to get a picture of the problem:

1. *Onset* is often acute, and may follow an episode of trauma. In the lumbar region a sudden strain may precipitate back pain, which is followed some hours later by sciatica as nerve root inflammation begins. In the cervical region, by contrast, a common onset is during sleep, in which the patient's head has been tilted to one side. He may awake to find that he has severe pain radiating into one shoulder and arm. Numbness may be delayed, and focal weakness may be masked by pain inhibition.

On the other hand, in either cervical or lumbar

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disc protrusion, there may be insidious onset and steady progression of symptoms very difficult to distinguish from tumor.

2. *Progression* of the clinical syndrome is usually irregular, with intermittent attacks of varying severity. The patient with a disc protrusion, if he has not been operated upon by an over-enthusiastic surgeon, has ordinarily been through several minor attacks of back pain and sciatica, or stiff neck and brachialgia, before he finally presents with a clear-cut clinical syndrome.

3. The *character* of the pain is more visceral than somatic. That is to say, it is "deep" and poorly localized, tends to be aching, and tends to be felt more centrally than distally. Areas of numbness are best appreciated, as we will point out later, in the distal part of the dermatome, but the pain due to nerve root inflammation is most felt in the shoulder or the hip, with radiation out toward the arm and forearm, or the thigh and calf.

4. *Location* — The pain is of little value in identifying the involved nerve root; in contrast, the slightest numbness or tingling is quite reliable in identifying a dermatome.

Because of the diffuse referral of the pain of an inflamed nerve root, its character and location may be similar to that of myocardial infarction or bursitis.

5. *Remissions and Exacerbations* — The familiar aggravation of pain with cough, sneeze, straining at stool, or specific movements of the spine are indications of inflamed tissue (root, ligament, or both) which is affected by these movements or by pressure fluctuations in the dural sac.

In the lumbar region, remissions and exacerbations are often related to traumatic episodes, using "traumatic" in the broadest sense of that word. A number of acute attacks, precipitated by bending, lifting, or twisting are the rule.

In the cervical region, by contrast, if the patient recovers from a bout of acute radiculitis from a

(Continued on next page)

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Fig. 1. Head Drop Test: The patient bends forward as far as possible with his head raised in full extension. He is then instructed to drop his head sharply

onto his chest. If an inflamed lumbar root is present, this maneuver may produce an acute stab of pain radiating down the leg.

COMMON ROOT SYNDROMES

Cervical

Sensory

Motor

Reflex

C5

Deltoid

C6

Biceps
Ext. Rotators

B.J.

C7

Triceps
Pronators

T.J.

C8

Intrinsics:
Median &
Ulnar

±T.J.

Lumbo-Sacral

Sensory

Motor

Reflex

L4

Quads
Femoris

K.J.

L5

Dorsiflexors

S1

Plantar
Flexors

A.J.

Fig. 2. Distribution of more sensory, motor, and reflex changes characteristic of nerve roots most commonly involved in disc disease.

soft disc protrusion it is less common for him to have another attack involving the same root. Presumably this is because a smaller volume of material is protruded and the body's repair mechanisms for shoring up the weak areas are more effective in the neck than they are in the lumbar region.

6. *Associated signs and symptoms*, such as weakness or numbness of an extremity, are the usual basis for considering the diagnosis of "disc" in a patient with a chronic low back pain or neck pain. It is these associated factors which suggest specific nerve root involvement.

7. *Response to previous therapy* is an important element in history, since disc disease often gets better, at least to some extent, with appropriate rest. Tumors of the vertebra or the spinal canal do not.

Lastly, there are some odd variations in the disc syndrome, such as painless appearance of neurologic deficit referable to the cord or cauda equina. This can lead to the incorrect diagnosis of a degenerative disease such as multiple sclerosis or peripheral neuropathy. Some other conditions involving pain and neurologic deficit may also mimic disc disease. The most notable of these are the carpal tunnel syndrome and acute myocardial infarction, in which the diffuse referral of pain from lower cervical roots is the common denominator. Precise neurologic evaluation solves most of these problems.

Examination — The first part of the examination, guided by the history, consists of a search for limitation of movement of the spine, loss of its normal curve, or list. Subtle signs of muscle imbalance may be brought out by having the patient bend forward and then straighten up again, noting a list to one side in the process or a disturbance of the rhythm of the back muscles. Tenderness of the interspinous ligaments is significant, but severe pain on percussion suggests a destructive lesion of the vertebra rather than disc disease.

Jugular compression, which has to be applied for at least 20 seconds before the test is considered negative, may aggravate the root pain. One should squeeze the patient's neck and ask if this has any effect on the pain. He usually answers "no" at first. After 8 or 10 seconds, about the time the ears become cyanotic, he may become restless and then admit that the pain is getting worse. Release of jugular pressure results in immediate alleviation of the pain. This has been called Naffziger's sign.

Another useful test for identifying an inflamed nerve root is the so-called "head drop test" (Fig. 1). The patient is asked to bend forward as far as he can with his head raised in full extension.

He is then told to drop his head sharply onto his chest. If there is an inflamed nerve root, this maneuver may produce an acute stab of pain radiating down the leg. It is only applicable to the lumbar region. These two signs are almost pathognomonic of nerve root inflammation.

The second part of the examination is the search for neurologic deficit. Figure 2 shows the distribution of more obvious sensory, motor, and reflex changes characteristic of the nerve roots most commonly involved in disc disease. The areas of sensory loss do not have sharp margins, and sensory loss to any modality is never complete in monoradicular syndromes. It is best to ask the patient if a given area "feeds natural" to touch or pin scratch. The ball of the thumb or index finger are served by as much sensory cortex as is the entire trunk, so minor differences in the transmission of touch are quite noticeable. Slight subjective changes, therefore, are significant. There is, after all, no such thing as "objective" sensory change.

Motor responses generally tend to parallel the distribution of the sensory disturbance. The gross pattern is not very hard to remember: The thigh, the anterior compartment of the leg, and the posterior compartment of the leg account for L4, L5, and S1. The deltoid, biceps, triceps, and intrinsic muscles of the hand (C5, C6, C7, and C8) provide a rough survey of the lower cervical roots. Weakness of external rotation (C6) is easily detected as the examiner forces the patient's hands together. Weakness of pronation (C7) is evidenced by the tendency of the elbow to move away from the thorax when the patient attempts to pronate his hands against resistance, because he is using internal rotators of the shoulder to assist the weak pronators.

SPECIAL DIAGNOSTIC PROCEDURES

Plain x-ray films are useful for showing degenerative disc disease and narrowing of the interspace, but a soft, freshly herniated disc often exists at the interspace adjacent to the one that shows the greatest chronic degenerative disc disease and osteoarthritis.

Electrodiagnostic studies are useful in confirming the presence of chronic nerve root damage, i.e., damage of over three weeks duration. Fibrillation seen with electromyography (EMG) is evidence of dead axone and means that the nerve root damage is severe. If the process seems to be progressing, this is reason to consider prompt surgical decompression. The reverse, the absence of evidence of dead axone, favors further conservative treatment if pain can be controlled. Obviously, if the pain is chiefly due to stretch of the posterior longitudinal

(Continued on next page)



Fig. 3. Lateral film of cervical spine and myelogram of a patient with severe right C7 radiculopathy. Nei-

ther plain films nor myelogram identify the involved nerve root.

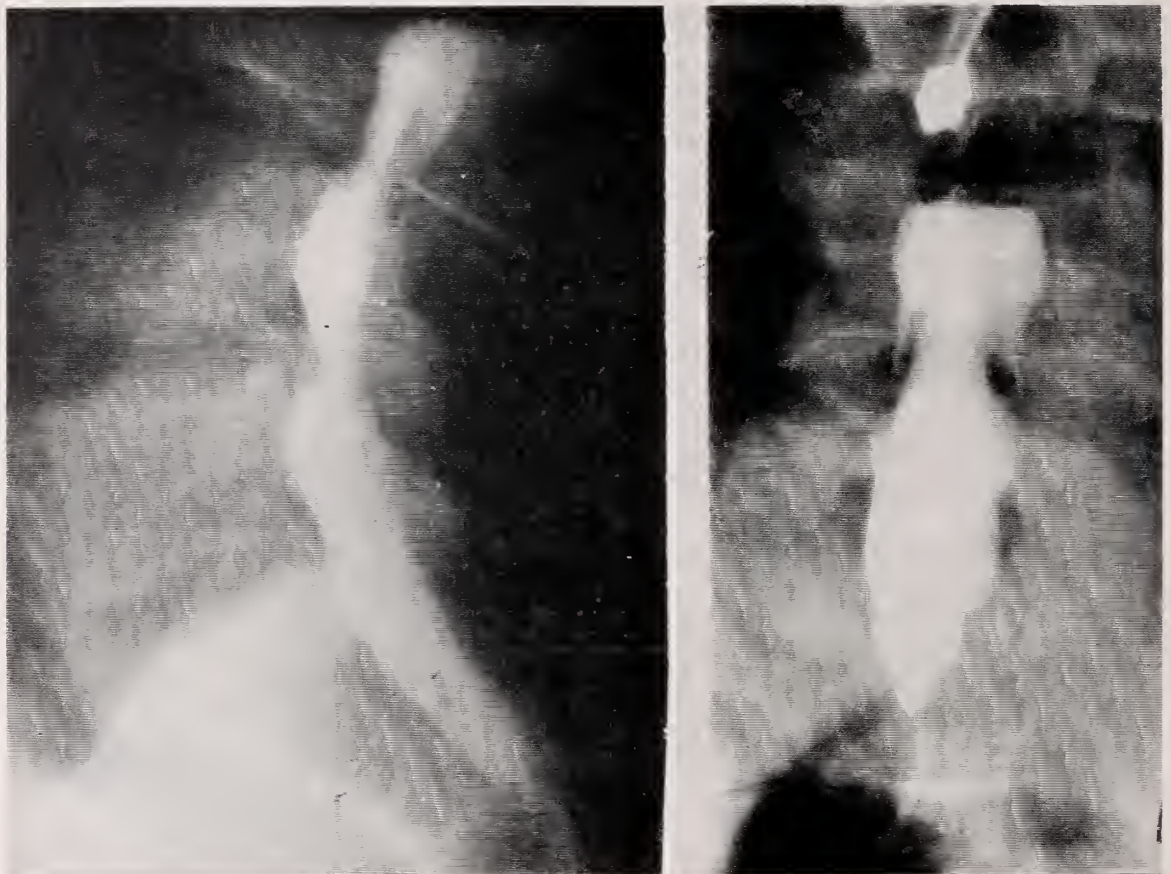


Fig. 4. Incidental finding of lumbar disc protrusion at time of myography for cervical disc. Five year

follow-up with only minor brief bouts of pain. No specific treatment.

nal ligament, neurologic deficit will not be found either by neurologic examination or by EMG.

In general, diskography and myelography should be reserved for those patients in whom the decision to operate has already been made because of failure of conservative therapy or serious neurologic defi-

cit. Only rarely should these tests be done simply to "rule out" a disc. Such procedures have their limitations, and the findings do not always correlate with the clinical picture. It is an important truism that *one does not operate upon the x-ray but upon the patient.*

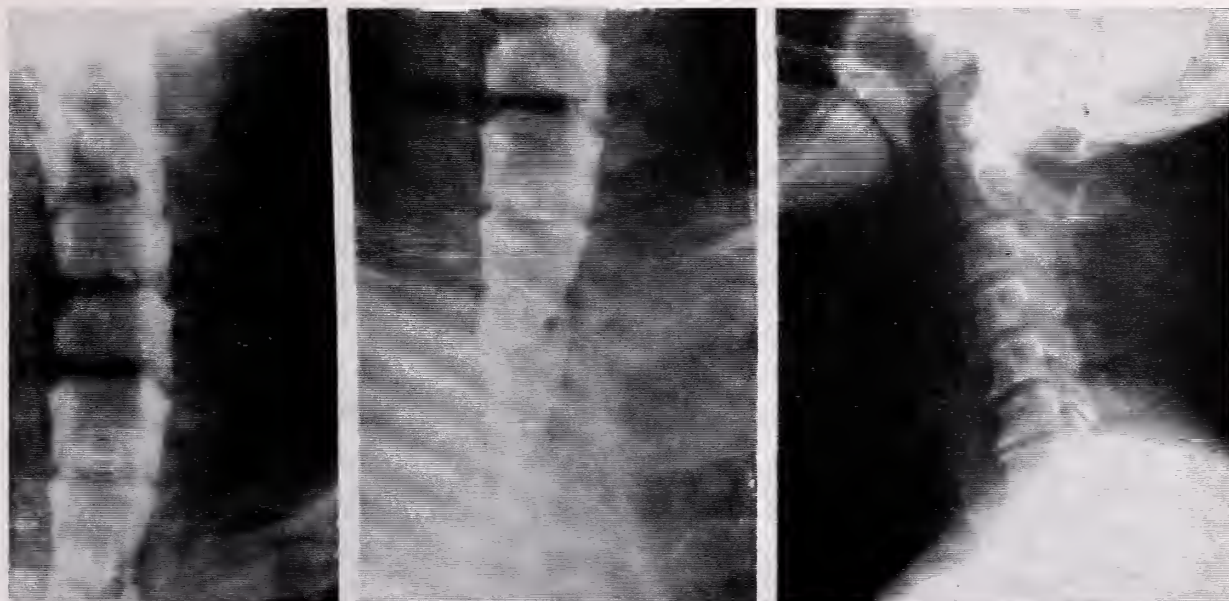


Fig. 5. Filling defects at C5-6 and C6-7 are due to osteophytes. Recovery followed disc removal at

C7-T1, left. Diagnosis of C8 radiculopathy was based solely on neurological deficit, supported by EMG.

Figure 3 is the cervical myelogram of a man with severe weakness of triceps and pronators, absent triceps reflex, and numbness of the tip of the right index finger. The osteophyte at C5-6 and the filling defects of C6 on both sides and C7 on the left were all irrelevant. Removal of a soft disc under C7 on the right relieved all symptoms. In Figure 4, the fourth lumbar interspace defect was an incidental finding. It has not interfered with the patient's skiing, tennis, and sailing over the past five years, in spite of occasional backache and sciatica of a few days duration. Pain, when it has occurred, has seemed to be related more to inflammation due to stretch of the posterior longitudinal ligament than to root irritation. Figure 5 shows a large but irrelevant filling defect of C6 and C7 root sleeves caused by osteophytes. The numbness of the ulnar side of the hand and marked weakness of the intrinsic muscles of the hand on the left recovered completely following removal

of a laterally placed disc protrusion involving C8 on the left side.

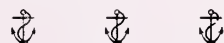
There are, then, *no* x-ray findings, no matter how dramatic, that in themselves warrant surgical exploration in the absence of symptoms, if one is sure that he is dealing with disc disease and not tumor. There is no place for "prophylactic" surgery in a condition that may heal itself. Similarly, surgical treatment must be directed at the neurologic deficit or other known cause of pain.

SUMMARY

1. Degenerative disc disease is ubiquitous.
2. Minor symptomatic episodes are common and need little treatment.
3. Severe attacks with radiculopathy deserve a trial of conservative therapy, if the neurologic deficit is not crippling.
4. Surgery, when unavoidable, must be directed by the clinical symptoms and neurologic deficit, not by the x-ray findings alone.

REFERENCES

- ¹Keyes, D. C., and Compere, E. L.: The Normal and Pathological Physiology of the Nucleus Pulposus of the Intervertebral Disc. *J. Bone Joint Surg.*, 14:897-938 (Oct.) 1932.



ONE SENTENCE ESSAY

The relationship between town and gown in this community ranges from acrimonious to hostile.

... Statement of faculty member of Baylor University, College of Medicine, Houston, Texas

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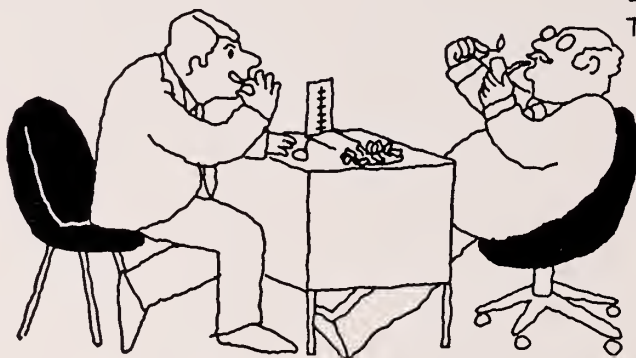
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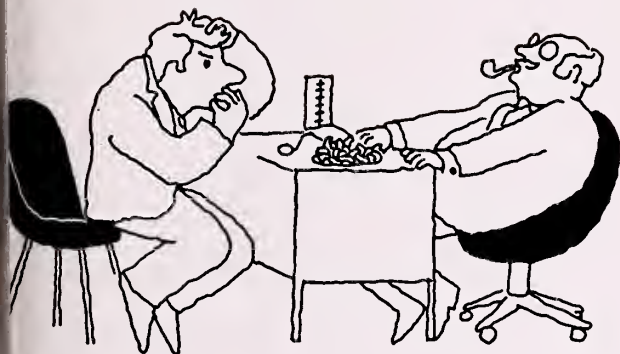
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other adverse reactions which have occurred in the adult. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers. **Precautions:** Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half to avoid hypotension during surgery, discontinue therapy with this agent two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progressive renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving

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PLENTY OF REST AND
TRY TO AVOID SITUATIONS
THAT MAKE US ANXIOUS
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TAKE MEDICINE TO LOWER
OUR BLOOD PRESSURE
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and allay anxiety in hypertension

corticosteroids, ACTH, or digitalis. Severe salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients. **Adverse Reactions:** The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness, and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient nopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates, narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight

gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angitis are possible. **Average Dosage:** One tablet daily with breakfast. **Availability:** Pink, single-scored tablets in bottles of 100 and 1000. (B)46-600-C

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ROENTGEN RIDDLE ANSWER

(See Page 483)

Appendicolith associated with acute appendicitis.

The abdominal x-ray reveals a slightly irregular, rounded concretion of the right lower quadrant overlying the right ilium. The presence of appendicolith, in association with symptoms, is almost diagnostic of inflammatory appendiceal disease. Appendicoliths are roentgenographically demonstrable in about 10 per cent of adult patients with acute appendicitis and are multiple in about one-third of the cases encountered. Generally, patients with the signs of acute appendicitis and roentgen evidence of appendicoliths present with advanced stages of appendiceal disease. It has been pointed out that in approximately 50 per cent of such patients the appendix is actually perforated.

The differential diagnosis of such a right lower quadrant concretion must include right ureteral calculus, bony enostosis, calcified mesenteric lymphnode, phlebolith, or an ingested pill.

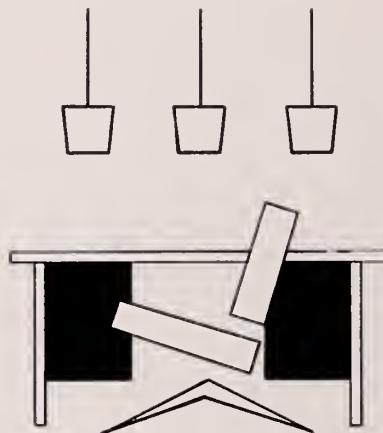
TWO SENTENCE ESSAY

Destroy the corrupt institutions, they say, and man's native goodness will flower. There isn't anything in history or anthropology to confirm the thesis, but it survives down the generations.

... John W. Gardner, former Secretary of HEW

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Contraindications: Hyperexcitability, undue restlessness, hyperthyroidism, porphyria; in patients on MAO inhibitors.

Precautions: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Excessive use of the amphetamines by unstable individuals may result in a psychological dependence. Rarely, symptoms of toxic psychosis (hallucinations, confusion, panic states, etc.) may occur with amphetamines, usually after prolonged high dosage. In these instances, withdraw the medication. Use cautiously in pregnant patients, especially in the first trimester.

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In a community in Colombia, in the district of Heliconia, dental caries is practically unknown. Examination of the drinking water for fluorine and examination of urinary excretion of fluoride in inhabitants of the community did not produce evidence that the resistance to caries was determined by this element. The authors speculate that there must be some other ingredient, not a fluoride, in the drinking water or soil of this community which protects against caries.

...Meija, et al: Bol. Ofic. Sanit Panamer,
June 1969

* * *

PREVALENCE OF CORONARY DISEASE AND ASSOCIATED FACTORS IN AUSTRALIAN RURAL COMMUNITY

Over a two-week period, 3,410 adults of a community in Western Australia, representing 91 per cent of the target population, were screened. The overall prevalence rate of "probable" coronary heart disease was 68/1,000 for men and 58/1,000 for women. The age- and sex-specific prevalence rates were very similar to those of Tecumseh, USA. Risk factors were analyzed using age- and sex-specific eightieth percentile values to simplify the data into "upper" and "lower" ranges. In both sexes, upper range serum cholesterol, blood pressure, and blood sugar levels after a glucose load were significantly and independently associated with coronary heart disease; the risk ratio for each was approximately twofold. In men only, upper range serum uric acid levels showed a strong relationship of similar magnitude to, and independent from, the association of upper range blood pressures.

...Welborn, T. A., et al.: Amer. J. Epidemiol.
89:521, 1969

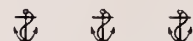
* * *

LIPID PROTEINOSIS IN INBRED NAMAQUALAND COMMUNITY

Genealogical information was obtained obtained for five of six cases of lipoid protenosis ascertained from the records of the Groote Schuur Hospital, Cape Town. All five index patients or their parents were born in or near a small village in the Namaqualand district of the northwestern Cape Province. Genealogical investigation showed that all five index cases were related, and led to the identification

of other affected relatives. The village community is highly inbred, and consists mainly of the descendants of marriages between European immigrants and local Khoikhoi women during the 18th and 19th centuries. The surname of one German immigrant is predominant in the pedigrees of all families which have been investigated.

...Gordon, W., and Botha, V.: Lancet 1:1032,
(May 24) 1969



THROUGH THE MICROSCOPE

(Concluded from Page 486)

cluding the long course of treatment with drugs required to cure tuberculosis.

Dr. Allan C. Barnes of the Johns Hopkins University School of Medicine of Baltimore was the medico-musical critic who analyzed "La Traviata" in the Journal of the American Medical Association (JAMA).

OLDER CITIZENS GET \$363 MILLION

Persons 65 years and over received more than \$363 million in health insurance benefits from private insurance companies last year, the Health Insurance Institute said recently. These benefits were from policies used to supplement the coverage provided through the Medicare program.

The private insurance benefits showed a drop of \$15 million from the previous year, although there were significant rises in both dental care and disability income payments.

Benefits for dental care nearly doubled over the previous year — from \$34 million to \$1.45 million — which disability income benefits rose from \$64 million to \$74 million.

Disability income insurance is designed to protect an individual's income — that is, guarantee him a steady income if he becomes ill or injured and is unable to work.

Dental insurance is available almost exclusively through group insurance plans rather than through individually-purchased policies.

The biggest decline in benefit payments was recorded in hospital expenses, including those paid under major medical coverage. The total fell from \$223 million to nearly \$200 million.

Surgical and regular medical benefits, including major medical coverage, was down from \$91 to \$88 million.

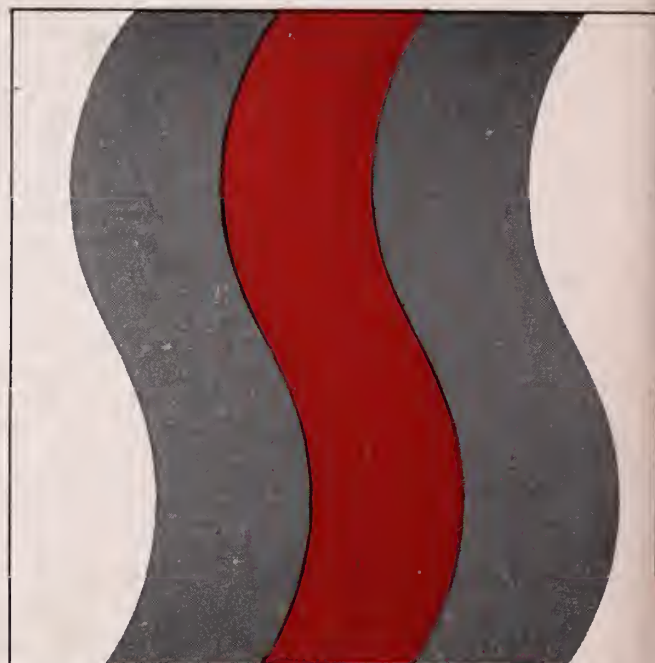


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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported at recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

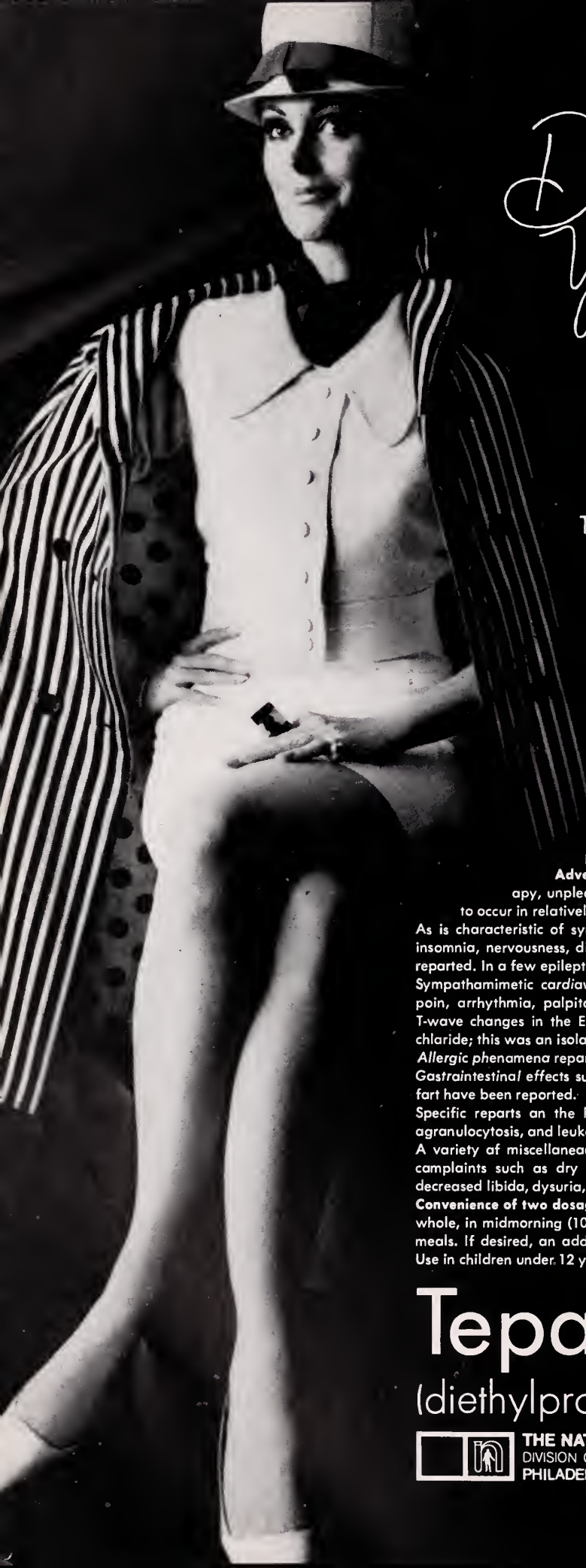
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increase and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

BALCONY

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Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others.

Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported.

Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia.

A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

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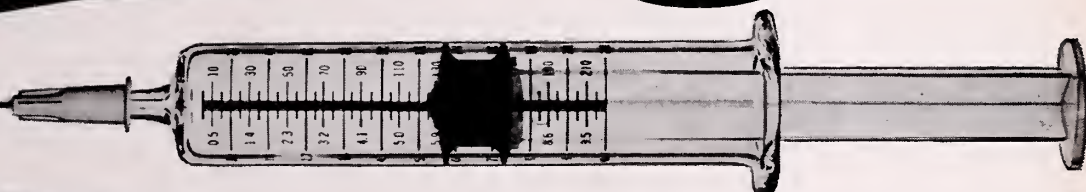
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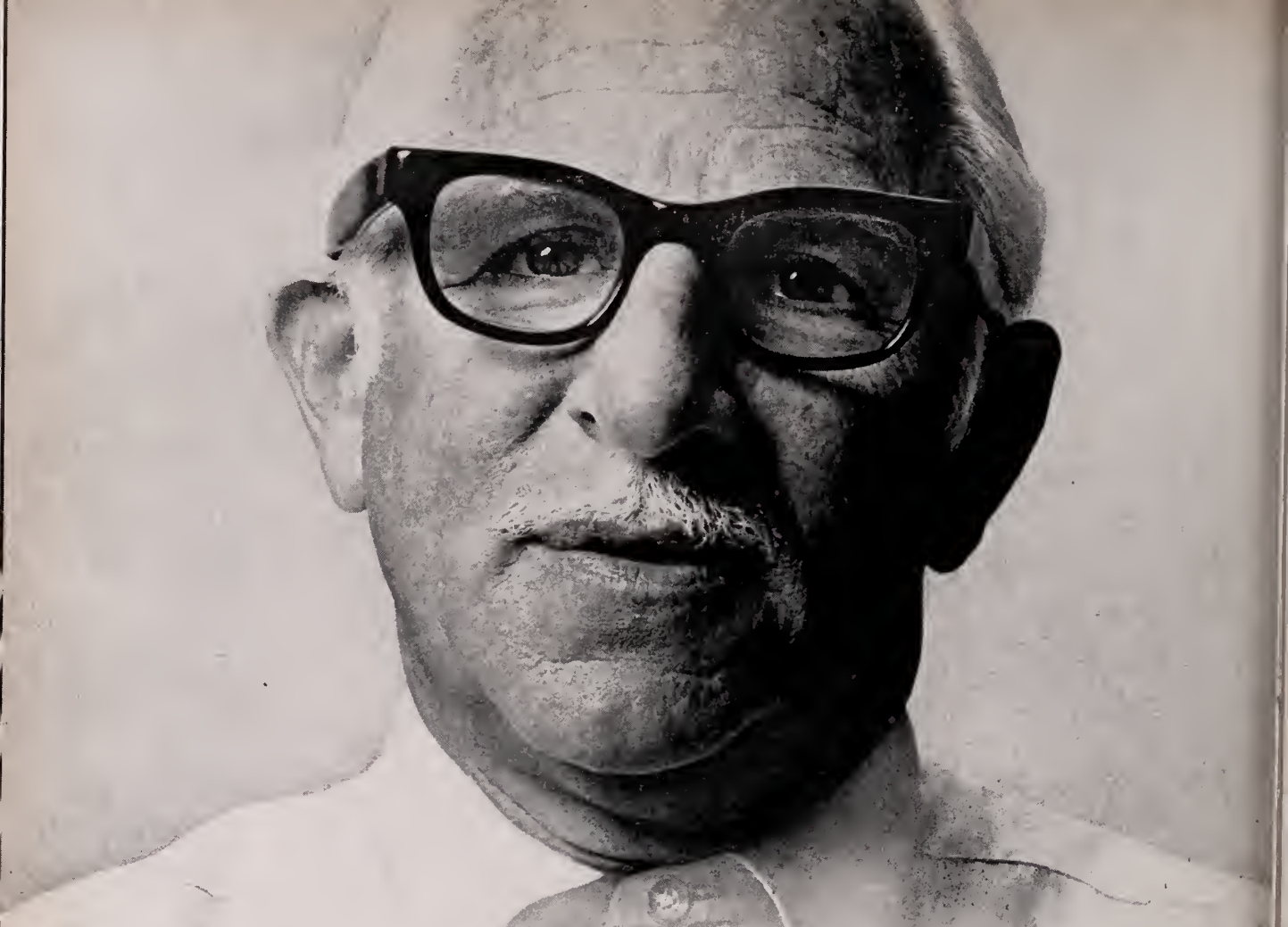
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Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—*anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani.* Skin—*maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare).* Hypersensitivity reactions—*urticaria, angioneurotic edema, anaphylaxis.* Teeth—*dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy.* Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, food and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

LEDERLE LABORATORIES

A Division of American Cyanamid Company, Pearl River, New York



The RHODE ISLAND MEDICAL JOURNAL

Vol. LII, No. 10

October, 1969

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SOME PRACTICAL IMPLICATIONS OF THE HEREDITY-ENVIRONMENT CONTROVERSY

... Some Are More Equal Than Others ...

REVEREND JOSEPH L. LENNON, O.P. 553

A REAPPRAISAL OF THE MOST CONTROVERSIAL DOCUMENT OF OUR TIME

... The "Coleman Report" Held That The Reason Nonwhite Children Learn Less Than The White Lies Outside The Classroom ...

CHRISTOPHER JENCKS 558

4th Annual Alex M. Burgess Oration —

PSYCHIATRY IN THE CHANGING MEDICAL CURRICULUM

... Observing Role Of Emotions On Cause And Management Of Illness Important To Student ...

JOHN C. NEMIAH, M.D. 563

ADJUVANT HORMONAL THERAPY IN BREAST CANCER

... Author Believes Proposal For Adjuvant Estrogen Therapy Has Not Been Described ...

EDWARD S. CAMERON, M.D. 570

Masters in Medicine —

LEONHARD RAUWOLF, M.D.

... The Physician-Botanist Honored And Reappraised ...

ROBERT V. LEWIS, M.D. 574

PROVISIONAL VITAL STATISTICS — JANUARY-JUNE, 1969

Rhode Island Department of Health 571

EDITORIALS

Fashions In Medicine	571
The Pot Boils	571
Treasures	578
Rhode Island Honored	578
Histocompatibility Typing Center	578
William P. Buffum, M.D.	573

DEPARTMENTS

Dermaquiz	547
Book Reviews	587
Roentgen Riddle	551
Through the Microscope	580
The Washington Scene	542

Indication: Mental depression.

Contraindications: Do not use MAO inhibitors concomitantly or within 2 weeks of the use of this drug. Hyperpyretic crises or severe convulsive seizures may occur with such combinations; potentiation of adverse reactions can be serious or even fatal.

When substituting Pertofrane in patients receiving an MAO inhibitor, allow an interval of at least 14 days. Initial dosage in such patients should be low and increases should be gradual and cautiously prescribed.

The drug is contraindicated following recent myocardial infarction and in patients with a known hypersensitivity to tricyclic antidepressants.

Warning: Activation of psychosis may occasionally be observed in schizophrenic patients. Due to atropine-like effects and sympathomimetic potentiation, use only with the greatest care in patients with narrow-angle glaucoma or urethral or ureteral spasm.

Do not use in patients with the following conditions unless the need outweighs the risk: severe coronary heart disease with EKG abnormalities, progressive heart failure, angina pectoris, paroxysmal tachycardia and active seizure disorder (may lower seizure threshold).

Desipramine and the parent compound, imipramine, have been shown to block the action of guanethidine and related adrenergic neuron-blocking agents.

Hypertensive episodes have been observed during surgery.

The concurrent use of other central nervous system drugs or alcohol may potentiate adverse effects. Since many such drugs may be used during surgery, desipramine should be discontinued prior to elective procedures.

Caution patients on the possibility of impaired ability to operate a motor vehicle or dangerous machinery.

Do not use in women who are or may become pregnant unless the clinical situation warrants the potential risk, and do not use in patients under 12 years of age.

Because of increased sensitivity to the drug, use lower than normal dosage in adolescent and geriatric patients.

Precautions: Potentially suicidal patients require careful supervision and protective measures during therapy. Discontinuation of the drug may be necessary in the presence of increased agitation and anxiety shifting to hypomanic or manic excitement.

Atropine-like effects may be more pronounced (e.g. paralytic ileus) in susceptible patients and in those receiving anticholinergic drugs (including antiparkinsonism agents).

Prescribe cautiously in hyperthyroid patients and in those receiving thyroid medications; transient cardiac arrhythmias have occurred in rare instances.

Periodic blood and liver studies should supplement careful clinical observations in all patients undergoing extended courses of therapy.

Adverse Reactions. The following have been reported:
Nervous System: dizziness, drowsiness, insomnia, headache, disturbed visual accommodation, tremor, unsteadiness, tinnitus, paresthesias, changes in EEG patterns, epileptiform seizures, mild extrapyramidal activity, falling and neuromuscular incoordination. A confusional state (with such symptoms as hallucinations and disorientation), particularly in older patients and at higher dosage, may require discontinuation of the drug.
Gastrointestinal Tract: anorexia, dryness of the mouth, nausea, epigastric distress, constipation and diarrhea.
Skin: skin rashes (including photosensitization), perspiration and flushing sensations.
Liver: rare cases of transient jaundice (apparently of an obstructive nature) and liver damage. If jaundice or abnormalities in liver function tests occur, discontinue the drug and investigate.
Blood Elements: bone-marrow depression, agranulocytosis, thrombocytopenia and purpura. If these occur, discontinue the drug. Transient eosinophilia has been observed.
Cardiovascular System: orthostatic hypotension and tachycardia. Carefully supervise patients requiring concomitant vasodilating therapy, particularly during initial phases.
Genitourinary System: urinary frequency or retention and impotence.
Endocrine System: occasional hormonal effects, including gynecomastia, galactorrhea and breast enlargement, and decreased libido and estrogenic effect.
Sensitivity: urticaria and rare instances of drug fever and cross-sensitivity with imipramine.

Dosage: All patients except geriatric and adolescent: 50 mg t.i.d. (150 mg daily). Dosage may be increased up to 200 mg daily. Geriatric and adolescent patients should usually be started with lower dosage (25 to 50 mg daily) and may not tolerate higher doses. Dosage may be increased up to 100 mg daily.

Lower maintenance dosages should be continued for at least 2 months after obtaining a satisfactory response.

Mild anxiety and agitation which may accompany depression usually remit as the depression responds. Occasionally, however, a sedative or tranquilizer may be indicated.

Availability: Maroon and pink capsules of 50 mg in bottles of 100; pink capsules of 25 mg in bottles of 100 and 1000. (B)46-530-G

For complete details, please see the full prescribing information.

Coming out of a depression.

And it can often begin to happen in 3 to 5 days with an antidepressant like Pertofrane. There's a lifting of depressed mood... a restoration of psychomotor activity. Patients usually begin to cope, work, maybe play, even enjoy.

It's not all beautiful. Sometimes there are side effects. And not everybody can take the drug. It may even be a slow process. But along with the care and comfort you give depressed patients, consider Pertofrane. Then consider the response.

Please read the prescribing information for full details on contraindications, warnings, precautions, adverse reactions and dosage. It's summarized on the left.

Pertofrane®

desipramine hydrochloride

New 50-mg.
capsules now available.

It's beautiful!



The AMBAR®
SCRAPBOOK
of

Obesity Oddities

FACT & LEGEND

OBESITY WAS A MILITARY OFFENSE!

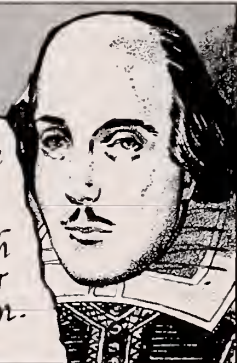
OVERWEIGHT ROMAN HORSEMEN WERE MADE TO FORFEIT THEIR MOUNTS AND BECOME FOOT SOLDIERS!



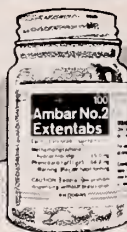
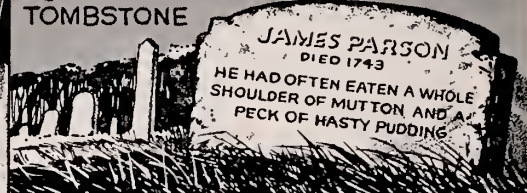
SHAKESPEARE

WAS AWARE OF THE DANGERS OF OBESITY HE WROTE...

*Make less thy body hence
and more thy grace;
leave gormandizing;
Know thy grave doth
gape for thee wider
than for other men.*



RECORDED ON AN ENGLISHMAN'S TOMBSTONE



THE COST OF
**AMBAR
EXTENTABS**

IS APPROXIMATELY ONE
HALF THAT OF OTHER LEAD-
ING APPETITE SUPPRESSANTS

**AN IMPORTANT FACTOR
IN LONG TERM THERAPY**



CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety...helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

**AMBAR #2
EXTENTABS®**

methamphetamine HCl 15 mg.,
phenobarbital 64.8 mg. (1 gr.)
(Warning: may be habit forming).

BRIEF SUMMARY/Indications: Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

A. H. ROBINS COMPANY,
RICHMOND, VA. 23220

A-H-ROBINS



"All Interns are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards; they all are underpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* in-

volving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to stay strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.



the thousandth teaspoonful

Peptic ulcer patients find
the thousandth dose of
this antacid as effective
and easy-to-take as the first!

Optimal neutralization—provided by the combination of aluminum and magnesium hydroxides.

Unfailing good taste—confirmed by 87.5% of 104 patients in one study, after a total of 20,459 documented days on Mylanta Liquid or tablets.¹

Concomitant relief of G. I. gas distress—provided by the proven antifatulent action of simethicone.²

Dosage: One or two tablets (well chewed or allowed to dissolve in the mouth); one or two teaspoonfuls to be taken between meals and at bedtime, or as directed by physician.

References: 1. Danhof, I. E.: Report on file. 2. Hoon, J. R.: Arch. Surg. 93:467 (Sept.) 1966.

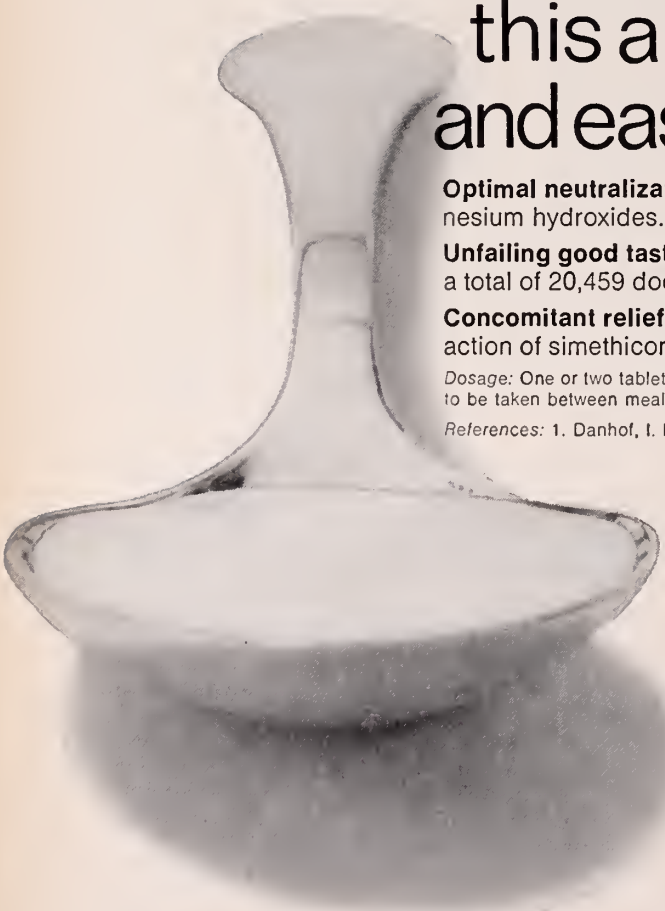
Mylanta[®]

LIQUID/TABLETS

aluminum and magnesium hydroxides *plus* simethicone

Stuart

Division/ATLAS CHEMICAL INDUSTRIES, INC./Pasadena, Calif. 91109



One of the best things you can do
for the cold sufferer



Ornade[®] Spansule[®]

brand of
sustained release capsules

Trademark

Each capsule contains 8 mg. of Teldrin[®] (brand of chlorpheniramine maleate); 50 mg. of phenylpropanolamine hydrochloride; 2.5 mg. of isopropamide, as the iodide.

Prompt relief from nasal congestion and hypersecretion due to colds.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

Contraindications: Glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal or bladder neck obstruction.

Precautions: Use cautiously in the presence of hypertension, hyperthyroidism, coronary artery disease; warn vehicle or machine operators of possible drowsiness.

Usage In Pregnancy: Use in pregnancy, nursing mothers and women who might bear children only when potential benefits have been weighed against possible hazards.

Note: The iodine in isopropamide iodide may alter PBI test results and will suppress I¹³¹ uptake; discontinue 'Ornade' one week before these tests.

Adverse Reactions: Drowsiness; excessive dryness of nose, throat or mouth; nervousness; insomnia.

Other known possible adverse reactions of the individual ingredients: nausea, vomiting, diarrhea, rash, dizziness, fatigue, tightness of chest, abdominal pain, irritability, tachycardia, headache, incoordination, tremor, difficulty in urination. Thrombocytopenia, leukopenia and convulsions have been reported.

Supplied: Bottles of 50 capsules.

One capsule q12h for round-the-clock relief

**SK
&F**

Smith Kline & French Laboratories

THE WASHINGTON SCENE

*A Summary Report Prepared by
the Washington Office of the Amer-
ican Medical Association.*



A Food and Drug Administration advisory committee found oral contraceptives to be "safe," but reported that British and U.S. studies have established "an etiologic relation between thromboembolic disorders" and their use.

The Advisory Committee on Obstetrics and Gynecology, making its second report on oral contraceptives, said that their benefits outweighed the risks sufficiently to designate them "safe" within the intent of the federal law.

As the potential carcinogenicity of oral contraceptives, the report said no conclusion could be drawn at this time.

The committee called for intensive research along three lines: 1) possible relationship of hormonal contraceptives and carcinoma of the breast and uterus; 2) determination of the basis and prognosis of metabolic alterations produced by hormonal contraceptives; and 3) development of new methods of contraception.

The committee, in its initial report three years ago, approved of oral contraceptives with reservations. It now said that these reservations appear to have been justified because of the adverse reactions reported in both scientific literature and the general press. But the report concluded:

"When these potential hazards and the value of the drugs are balanced, the committee finds the ratio of benefit to risk sufficiently high to justify the designation safe within the intent of the legislation (Kefauver-Harris Amendments of 1962)."

The report said scientific studies "suggest that the mortality from thromboembolic disorders attributable to the oral contraceptives is about three per 100,000 women per year, adding less than three per cent to the total age-specific mortality in users of these drugs." In a U.S. study, the risk of thromboembolism to a woman using hormonal contraceptives was estimated by indirect methods to be 4.4 times that of a non-user.

The report said there is no evidence that any metabolic alterations induced by the oral contraceptives pose serious health hazards.

The effectiveness of oral contraceptives was found to be significantly higher than for intra-uterine devices or traditional methods.

* * *

Abandoning a long court fight, the Internal Revenue Service reversed itself and ruled that organizations of physicians authorized under state professional association laws will be treated as corporations for tax purposes.

The IRS announced that it would not appeal to the Supreme Court two recent decisions by U.S. courts of appeal favoring the professional association. In accordance with these court decisions, the IRS said, "organizations of doctors, lawyers and other professional people organized under state professional association acts will, generally, be treated as corporations for tax purposes."

Forty-two states have such laws which offer tax benefits, including deferment of the tax on pension contributions until retirement.

The court controversy over IRS treatment of the professional associations for tax purposes dated back to the early 1950's. It was given a "Kintner" label in 1954 when an appeals court ruled in favor of the professionals in a case brought by Arthur Kintner, M.D., Missoula, Mont.

* * *

The federal government has started a program designed to increase enrollment in the nation's schools of medicine and osteopathy by 4,000 over the next four years.

Known as the Physician Augmentation Program, the activity, under the Department of Health, Education and Welfare, supports the addition of 1,000 first year places commencing with the fall term of 1970. These places are in addition to any increase to which the schools have already committed themselves. Total enrollment through this program is expected to be about 4,000 in the fourth year of operation. The Physician Augmentation Program is authorized under the Health Manpower Act of 1968.

(Continued on Page 546)

**"coughing
is not a harmless
privilege"**

—Current Therapy 1967, ed. by Conn, H. F., P. 88—

**if cough
serves no useful
purpose**

Rx Tussionex®

(Resin complexes of Hydrocodone and Phenyltoloxamine)

**... it works
(usually
for 10 to 12
hours*)**

TUSSIONEX SUSPENSION/TABLETS: Each teaspoonful (5 cc.) or tablet of TUSSIONEX contains 5 mg. hydrocodone (Warning: May be habit-forming) and 10 mg. phenyltoloxamine, both as cation exchange resin complexes of sulfonated polystyrene.

Class B narcotic — oral Rx where state laws permit.

INDICATIONS: Coughs associated with respiratory infections including chronic sinusitis, colds, influenza, bronchitis, and cough resulting from measles, pulmonary tuberculosis, bronchiectasis, and bronchogenic carcinoma.

***DOSAGE:** *Adults:* 1 teaspoonful (5 cc.) or tablet every 8-12 hours.
Children: Under 1 year: 1/4 teaspoonful every 12 hours.
From 1-5 years: 1/2 teaspoonful every 12 hours. Over 5 years:
1 teaspoonful every 12 hours.

SIDE EFFECTS: May include mild constipation, nausea, facial pruritus, or drowsiness.

For complete detailed information, refer to package insert or official brochure.

Strassenburgh

Strassenburgh Laboratories Division
Wallace & Tiernan Inc., Rochester, N. Y. 14623

lubadub lubadub

**His heart tells him he's an invalid.
You know he's not.**

Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis,

badubdub lubad

anxiety is expected in the cardiovascular patient. A little may even be desirable.

But when anxiety is exaggerated . . . when it interferes with sleep . . . when it aggravates cardiovascular symptoms, your help may be needed.

Naturally, you'll want to reassure the patient.

and perhaps prescribe Equanil (meprobamate) as adjunctive therapy. It helps relieve anxiety and tension specifically, yet gently.


Almost 15 years' use has shown that Equanil is usually well tolerated as well as effective. Side effects are generally limited to transient drowsiness; serious, therapy-interrupting side effects are rare.

stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® [strip pack], Wyeth.) Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

Wyeth Laboratories Philadelphia, Pa.

Equanil®
(meprobamate) 



No place for beginners

Terramycin[®] (oxytetracycline)

An infection of rapid onset requiring prompt attention. Teenage girl with chills, fever, abdominal pain, backache and nausea. Frequent and urgent urination with burning. On examination—tenderness over kidney. Blood count and urinalysis confirm the diagnosis: acute pyelonephritis. Treatment is initiated with Terramycin. Within a few days of follow-up therapy, the patient is markedly improved. The pretreatment urine culture shows a strain of *E. coli* highly susceptible to Terramycin.

Experience has shown that Terramycin offers special advantages in treating urinary tract infections when strains of causative bacteria are susceptible. Broad-spectrum coverage unaffected by penicillinase. Effective tissue levels to help reach foci of infection in renal parenchyma. High urine levels—excreted by kidney in *active* form.

With Terramycin, you have the assurance that comes with choosing an agent physicians have depended on for over 18 years. In difficult as well as routine cases, when tests reveal susceptible organisms, consider Terramycin. One of the world's most widely used broad-spectrums.

Contraindicated: In individuals hypersensitive to oxytetracycline.

Warnings: Reduce usual oral dosage and consider antibiotic serum level determinations in patients with impaired renal function.

Use of oxytetracycline during the last trimester of pregnancy, neonatal period and early childhood may cause discoloration of developing teeth. This effect occurs mostly during long-term use of the drug, but it has also been observed in usual short-treatment courses.

During treatment with tetracyclines, individuals susceptible to photodynamic reactions should avoid direct sunlight; if such reactions occur, discontinue therapy.

Note: With oxytetracycline, phototoxicity is unknown and photoallergy very rare.

Precautions: Use of broad-spectrum antibiotics occasionally may result in overgrowth of nonsusceptible organisms. Where such infections occur, discontinue oxytetracycline and institute specific therapy. Increased intracranial pressure in infants is a possibility. Symptoms disappear upon discontinuation of therapy.

Adverse Reactions: Nausea, diarrhea, glossitis, stomatitis, proctitis, vaginitis and dermatitis, as well as reactions of an allergic nature, may occur but are rare.

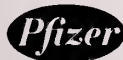
Supply:* Terramycin Capsules: oxytetracycline HCl, 250 mg. and 125 mg. Terramycin Syrup: calcium oxytetracycline, 125 mg. per 5 cc. Terramycin Pediatric Drops: calcium oxytetracycline, 100 mg. per cc.

*All potencies listed are in terms of the standard, oxytetracycline.

More detailed professional information available on request.



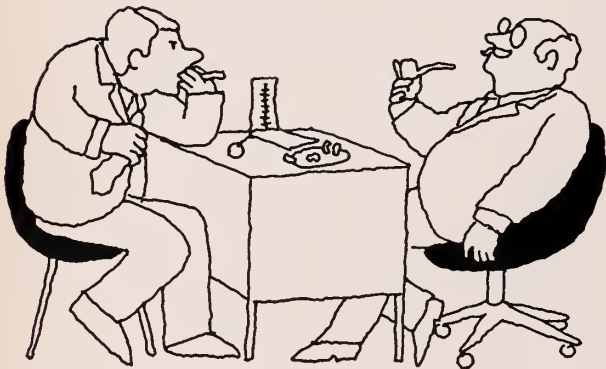
Terramycin[®] (oxytetracycline)



LABORATORIES DIVISION
New York, N. Y. 10017

The Apprehensive Hypertensive

WELL, YOU HAVE WHAT WE CALL
MODERATE HYPERTENSION—
HIGH BLOOD PRESSURE. NOW I
DON'T WANT YOU TO WORRY,
BUT WE ARE GOING TO HAVE TO
CHANGE A FEW LIVING HABITS.
FIRST, WE'RE GOING TO HAVE TO
CUT OUT SMOKING—ALTOGETHER.



THEN WE HAVE
TO LOSE WEIGHT.
20 POUNDS
SHOULD DO IT...
WE'LL TALK A LITTLE
LATER ABOUT THIS
DIET WE'RE GOING
TO START.



Regroton® to lower blood pressure

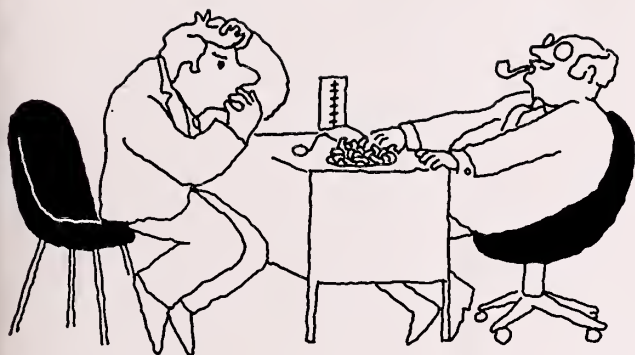
chlorthalidone 50 mg.
reserpine U.S.P. 0.25 mg.

Regroton®: chlorthalidone 50 mg., reserpine U.S.P. 0.25 mg.

Indications: Hypertension. **Contraindications:** History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. **Warning:** With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs. **Use in pregnancy:** Because chlorthalidone may cross the placental barrier and appear in cord blood and thiazides may appear in breast milk, this drug should be used with care in pregnant patients and nursing mothers. When used in women of childbearing age, the potential benefits of the drug should be weighed against the possible hazards to the fetus. Use of chlorthalidone may result in fetal or neonatal jaundice, thrombocytopenia, and possibly

other adverse reactions which have occurred in the adult. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers. **Precautions:** Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue therapy with this agent two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving

WE'VE GOT TO GET
PLENTY OF REST AND
TRY TO AVOID SITUATIONS
THAT MAKE US ANXIOUS
OR TENSE. AND WE'LL
TAKE MEDICINE TO LOWER
OUR BLOOD PRESSURE
AND CALM US DOWN.



WE'VE GOT
PROBLEMS.




and allay anxiety in hypertension

corticosteroids, ACTH, or digitalis. Severe salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients. **Adverse Reactions:** The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight

gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angitis are possible. **Average Dosage:** One tablet daily with breakfast. **Availability:** Pink, single-scored tablets in bottles of 100 and 1000. (B)46-600-C

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chlorthalidone 50 mg.
reserpine U.S.P. 0.25 mg.

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THE WASHINGTON SCENE

(Continued from Page 542)

Grants will be awarded on a national competitive basis to those schools of medicine and osteopathy that document their intention to institute a major increase in their first-year enrollment and that appear to have the greatest potential for achieving major increases with their own resources as supplemented by funds allocated by the program.

* * *

Robert H. Finch, secretary of Health, Education and Welfare, proposed that state medicaid administrators work more closely with state medical societies on cost control in the federal-state health care program.

He also said the states should review more claims in efforts to control medicaid costs.

Finch gave his views on controlling medicaid costs in a letter to Sen. Abraham Ribicoff (D., Conn.) who had asked what was being done and what additionally could be done about rising expenditures in the program.

In answer to a question as to what states "could be doing under existing law to control medicaid costs more efficiently," Finch said:

"One answer is to spend more money on the claims review function. For example, there are two

states where annual medicaid expenditures are in excess of one hundred million dollars. One employs seven people for its review function, the other employs seventy. The latter state has very effective control over costs and utilization.

"But I am coming to believe that a major factor is the degree to which physicians are involved in the program, not simply as purveyors of medical care but also as watchdogs of costs and guardians of quality. They generate the bulk of medicaid expenditures. They authorize admissions to hospitals and skilled nursing homes and they write prescriptions. The need for genuine physician participation in controlling costs is self-evident. A state medicaid administrator would be well advised to make extensive use of his medical advisory committee and to engineer the plan in detail through the state medical society."

As to what states already are doing, Finch said:

"Some states are using prior authorization of service (emergencies excepted). Some use fee schedules. Some use audit tolerance levels. Some incorporate parameters of medical care into their data processing systems. Some develop client and purveyor profiles. Some use computers to process claims. Others contract the review function to a fiscal agent, e.g., a Blue Cross plan. Some use a medical audit and some have been doing very little."

Ribicoff said in his letter to Finch that he understood "there is very uneven performance of medicaid review throughout the nation."

Peer review under leadership of state and county medical societies has top priority in the American Medical Association recommendations for controlling costs in both medicaid and medicare. A report of the AMA board of trustees approved by the house of delegates at the 1969 annual convention in New York strongly urged that:

—"Peer review be assigned the highest priority by the state and county medical societies; that where existing mechanisms exist, they be strengthened, and where they do not, they be promptly established.

"Quick and decisive action be taken, in appropriate fashion, to discipline those few physicians determined after investigation to be abusing medicare and medicaid, either fraudulently or otherwise."

The AMA recommendations for cost control in government health programs also include:

—"The promotion of innovative health service delivery systems for low income communities with emphasis on ambulatory care.

—"Programs by local medical societies to insure preservation of quality health care in the face of cost containment measures."

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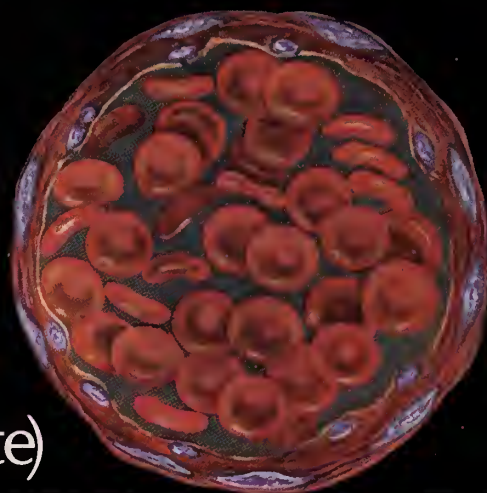
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Side Effects: Transient flushing, gastric disturbances, minor skin rashes and allergies may occur in some patients, seldom requiring discontinuation of the drug.

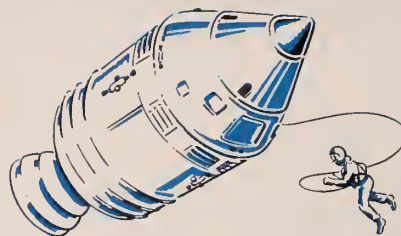
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DERMA QUIZ

Conducted by FRANCESCO RONCHESE, M.D.



At left, a whitish, branny, flaky dermatosis, slightly itching, of a few months duration, transient.



At right, a mortar-like-thick patch, duration years.
(For Answer See Page 590)

IMPORTANT MEETINGS AHEAD

Monday, November 3.....Providence Medical Association. Regular meeting at the Medical Library at 8:30 p.m.
Speaker: Herbert Ratakansky, M.D., on "Intestinal Insights—A View of Gastric Pathology."

Tuesday, November 4 and
Thursday, November 6.....N. E. Postgraduate Assembly at Boston

Wednesday, November 5.....John F. Kenney Clinic Day at Pawtucket Memorial Hospital.

Monday, November 10.....Providence Surgical Society. Meeting at Agawam Hunt Club.

Sunday, November 23.....Clinical Session of AMA starts at Denver, Colorado.

Monday, December 1.....Providence Medical Association. Regular meeting at the Medical Library at 8:30 p.m. Speaker: Louis Weinstein, M.D., on "Immunization — New Developments."

Saturday, December 6.....Rhode Island Hospital Scientific Assembly. All day at the Hospital.

THE BREAKUP of a business partnership, the crack-up of a marriage, the shake-up of being fired or reduced to bankruptcy... after any significant loss or severe blow to self-esteem, *both* anxiety and depression almost always follow.





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SEVERE ANXIETY
WITH COEXISTING
DEPRESSION

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TRANQUILIZER-
ANTIDEPRESSANT

Containing perphenazine and amitriptyline HCl

For prescribing information, including indications, contraindications, warnings, precautions, and side effects, please see following page.

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INDICATIONS: Patients with moderate to severe anxiety and/or agitation and depressed mood; patients with depression in whom anxiety and/or agitation are severe; patients with depression and anxiety in association with chronic physical disease; schizophrenics with associated depressive symptoms.

CONTRAINDICATIONS: Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); bone marrow depression; urinary retention; pregnancy; glaucoma. Do not give in combination with MAOI drugs because of possible potentiation that may even cause death. Allow at least 2 weeks between therapies. In such patients therapy with TRIAVIL should be initiated cautiously, with gradual increase in the dosage required to obtain a satisfactory response.

WARNINGS: Patients should be warned against driving a car or operating machinery or apparatus requiring alert attention, and that response to alcohol may be potentiated.

PRECAUTIONS: Suicide is always a possibility in mental depression and may remain until significant remission occurs. Supervise patients closely in case they may require hospitalization or concomitant electroshock therapy. Untoward reactions have been reported after the combined use of antidepressant agents having various modes of activity. Accordingly, consider possibility of potentiation in combined use of antidepressants. Not recommended for use in children. Mania or hypomania may be precipitated in manic-depressives (perphenazine in TRIAVIL seems to reduce likelihood of this effect). If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Caution patients about errors of judgment due to change in mood.

SIDE EFFECTS: Similar to those reported with either constituent alone.

Perphenazine: Should not be used indiscriminately. Use caution in patients with history of convulsive disorders or

severe reactions to other phenothiazines. Likelihood of untoward actions greater with high doses. Closely supervise with any dosage. Side effects may be any of those reported with phenothiazine drugs: blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); liver damage (jaundice, biliary stasis); extrapyramidal symptoms (opisthotonos, oculogyric crisis, hyperreflexia, dystonia, akathisia, dyskinesia, parkinsonism) usually controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine; severe acute hypotension (of particular concern in patients with mitral insufficiency or pheochromocytoma); skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; endocrine disturbances (lactation, galactorrhea, disturbances of menstrual cycle); grand mal convulsions; cerebral edema; altered cerebrospinal fluid proteins; polyphagia; paradoxical excitement; photophobia; skin pigmentation; failure of ejaculation; EKG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions such as dryness of the mouth, headache, nausea, vomiting, constipation, obstipation, urinary frequency, blurred vision, nasal congestion, and a change in the pulse rate; hypnotic effects; pigmentary retinopathy; corneal and lenticular pigmentation; occasional lassitude; muscle weakness; mild insomnia; significant unexplained rise in body temperature may suggest intolerance to perphenazine, in which case discontinue. Antiemetic effect may obscure signs of toxicity due to overdosage of other drugs or make diagnosis of other disorders such as brain tumors or intestinal obstruction difficult. May potentiate central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol), atropine, heat, and phosphorous insecticides.

Amitriptyline: Careful observation of all patients recommended. Side effects include drowsiness (may occur within the first few days of therapy); dizziness; nausea; excitement; hypotension; fainting; fine tremor; jitteriness; weakness; headache; heartburn; anorexia; increased perspiration; incoordination; allergic-type reactions manifested by skin rash, swelling of face and tongue, itching; numbness and tingling of limbs, including peripheral neuropathy; activation of latent schizophrenia (however, the perphenazine content may prevent this reaction in some cases); epileptiform seizures in chronic schizophrenics; temporary confusion, disturbed concentration, or transient visual hallucinations on high doses; evidence of anticholinergic activity, such as tachycardia, dryness of mouth, blurring of vision, urinary retention, constipation, paralytic ileus; agranulocytosis; jaundice. The antidepressant activity may be evident within 3 or 4 days or may take as long as 30 days to develop adequately, and lack of response sometimes occurs. Response to medication will vary according to severity as well as type of depression present. Elderly patients and adolescents can often be managed on lower dosage levels.

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References: 1. Gardner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Parter, P. S., and Lyle, J. S.: Arch. Dermat. 93:402, 1966. 3. Walsh, H.: Hildebrandt, R. J., and Prystowsky, H.: Am. J. Obst. & Gynec.

93:904, 1965. 4. Vaginitis and the Pill: J.A.M.A. 196:731, 1966. 5. Guerriera, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. Today's Drugs, New York, Grune & Stratton, Inc., 1965, p. 316. 8. Gray, L. A., and Bornes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Salerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. 10. Walsh, J. C.; Sheffery, J. B., and Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.



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Conducted by **STEPHEN A. SCHULMAN, M.D.**
Associate Radiologist, Miriam Hospital, Providence



This infant was brought to the Accident Room because of constant crying. Following physical examination, these roentgenologic studies were obtained.

The pertinent roentengologic findings are metaphyseal fragmentation and periosteal new bone formation most apparent along the shaft of the right femur.

(For Answer See Page 590)

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(Act of October 23, 1962; Section 4369, Title 39 United States Code)

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5. Location of headquarters or general business offices of the publishers: 106 Francis St., Providence, R. I. 02903
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Editor: Seebert J. Goldowsky, M.D., 209 Angell St., Providence, R. I. 02906
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10. Extent and nature of circulation	Average Copies each issue during preceding 12 Months		Single Issue to filing date
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B. Paid Circulation			
1. Sales through dealers and carriers, street vendors and counter sales	None		
2. Mail subscriptions	1,269		
C. Total Paid Circulation	1,269		
D. Free Distribution (<i>including samples</i>) by mail, carrier or other means	316		
E. Total Distribution (<i>Sum of C and D</i>)	1,585		
F. Office Use, Left-over, Unaccounted, Spoiled After Printing	40		
G. Total (<i>Sum of E and F— should equal net press run shown in A</i>)	1,625		

I certify that the statements made by me above are correct and complete.

Seebert J. Goldowsky, *Editor-in-chief*

ONE SENTENCE ESSAY

The trouble with women often is: MEN.

... from advertisement for an androgen reported to be helpful in male climacteric or impotence

* * *

ONE SENTENCE ESSAY

I think, on the whole, Social Security has to be considered a failure because we have been paying into it for 35 years, and we have more old people than we ever had.

... Pat Paulsen, unsuccessful presidential candidate

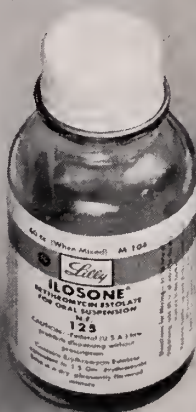


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SOME PRACTICAL IMPLICATIONS OF THE HEREDITY-ENVIRONMENT CONTROVERSY*

Some Are More Equal Than Others

I recall seeing a cartoon in which a boy is being bawled out by his parent for bringing home a poor report card. "Well Dad" he said, "What do you think is wrong with me, heredity or environment?" This cartoon points up the perennial battle between those who say that heredity counts for everything, and those who say environment is what counts most.

It is generally conceded that even if you studied night and day, and strained with might and main, you still would not be able to increase your basic brain power. The initial inborn capacity of intelligence is a gift of nature. It is tied up with the genes. If you feel that you have been cheated out of your fair share of brains (or your fair share of hair), the only thing you can do about it is to blame your ancestors. That is why I used to tell my students: "If God did not make you a genius, then don't expect Providence College to work miracles."

Any teacher will tell you that the intelligence of his pupils sets limits to what he can accomplish in the classroom. Any athletic coach will tell you he can't win basketball games if he doesn't have the proper material. While we often say "where there's a will there's a way," we are forced to admit that the strongest determination and the best training cannot transform a feeble-minded fellow into a theoretical physicist.

INTELLIGENCE FACTOR

Intelligence, then, is usually thought to be the prime causal factor in learning. But other factors play an important part — teachers, administrators, curriculum, teaching techniques, environmental influences, the dollars spent on schooling. Indeed, all these factors and more determine whether the limits of intelligence will ever be reached. Some men simply do not possess the equipment to climb very high into the rarefied atmosphere of abstract thought; but given every chance possible they will continue to expand within the orbit of their talents. This kind of development never stops until death.

*Presented at the Providence Rotary Club luncheon, July 29, 1969.

REV. JOSEPH L. LENNON, O.P., of Providence, R.I., Vice President for Community Affairs, Providence College.

And so we have the maxim: "Who cannot what he will, let him will what he can."

Without opportunity, "full many a flower is born to blush unseen and waste its sweetness on the desert air." Many people will never get the chance to show what they're made of. Tennessee and Kentucky mountain-children, for instance, seldom become scholars, scientists or artists because their isolated lives deprive them of the stimulation needed for such pursuits. Slum children are in the same boat. They are trapped in such a stultifying, intellectually sterile atmosphere that they never develop any incentive to improve themselves. This also partly explains why the odds are greatly in favor of the son of a sociologist winning out over the son of an illiterate day laborer in the battle for college scholarships. A home with meager cultural advantages — devoid of literature, deficient in verbal skills, indifferent to education, or anti-intellectual in attitude — has a depressing effect on the growth of intellectual interests.

Of course, in education as in life, motivation means a lot. Teachers know that it is not only the *I.Q.* but the *I will*, which often makes the difference between a pupil flunking or passing. All of you have known, I am sure, men of modest natural gifts and only average intelligence, whose ambition and enthusiasm were so strong as to carry them on to high achievement; while others of great inborn talent never accomplished much through lack of determination and desire.

Bernard Rosen, in his study "Race, Ethnicity, and the Achievement Syndrome" states: "Achievement-motivation is more characteristic of Greeks, Jews and white Protestants than of Italians, French Canadians and Negroes." In other words, people from certain racial and national backgrounds do not instill their children with a drive to achieve at school or at work, to get ahead, to better themselves, to raise their socioeconomic standing. Although the motto of middle class America is "Onward and Upward," some children are simply not

(Continued on next page)

imbued with the ambition to get ahead in the way "getting ahead" is defined in America.

ACHIEVEMENT ORIENTATION

The much discussed Coleman Report, *Equality of Education Opportunity*, highlights this fact. Coleman's controversial findings suggest that what the school puts in by way of teachers and program, for example, may be less influential than what each child brings from his home and encounters at school from other homes. In other words, students in certain select suburban schools do well because of the achievement orientation of virtually all the homes represented in the school. By contrast, students in the urban ghetto bring little from their homes and they encounter little from other homes that contribute to success in school. Following Coleman, then, instead of debating the effectiveness of this or that teaching technique for the ghetto school, perhaps we should be devising ways of achieving a more heterogeneous mix of students.

Hidden in Coleman's findings is the startling interpretation that our schools can teach only children who come from homes that provide certain prerequisites for learning. Looked at this way, the school curriculum and the teaching procedures seem to work — when they work at all — when the children of the middle class, white or black, come to school with attitudes and behavioral dispositions in harmony with the school's patterns. For example, from infancy the middle class child is raised in a home where parental approval is heavily weighted toward language development: "Say, Dada." "Say, Mama." "Show Grandma how you can say airplane." Brightness in speech is a sure bestower of family awards and produces children well trained in seeking adult approval for verbal performance. When the middle class child goes to school he meets the same reward system where verbal facility is a big advantage. The slum child who lacks this facility falls behind from the start. All of which may indicate that we need to restructure our schools and provide an educational climate that will match the needs of all children, even those verbally crippled because of an impoverished environment. Evidently, the school is bound to fail in educating the children of the poor if it follows the same old method of relying on motivations and behaviors induced by middle class child-rearing practices. Education starts with taking children as they are.

There are some practical implications in these observations: First of all, knowledge of basic intelligence can be gained only indirectly, chiefly by means of I.Q. tests. The I.Q. test is a cultural invention, and not a biological characteristic. Hence it does not measure some pure entity; it cannot directly reach raw intelligence, although it is better than any other instrument we have for predicting the scholastic performance of a child. An I.Q.

score is the result of a host of factors, including the amount of knowledge the child has, the extent to which he is attending to the examiner, his family conditioning, and his motivation to do well. If, then, performance on such tests is influenced by the kind of background from which a child comes, the culturally deprived and disadvantaged child will usually show up poorly when tested. Give the underprivileged special attention, however, and it might be possible to raise their I.Q., or at least improve their performance in school.

COMPENSATORY PROGRAMS

This is the idea behind the strenuous efforts of America's recent gigantic educational programs. It was thought that children would learn more in direct proportion to pouring in additional money, teachers, classrooms, and through the integration of all school systems. "Compensatory" programs for disadvantaged children were started across the country under Title I of the 1965 School Aid Bill. The popularity of these programs reflected the near-religious belief of Americans that education can solve all of life's problems, particularly poverty. The more education, we believe, the better. At heart, Americans are incurably Utopian.

What has been the result? All the signs indicate, alas, for the children involved, that these programs have been a "monumental flop," to use the words of Congressman Roman C. Pucinski, one of the bill's original sponsors. Indeed, the United States Office of Education revealed that the average disadvantaged child was further behind national norms in reading and arithmetic *after* going through Title I Programs than he had been before.

This came as no surprise to students of earlier compensatory programs. New York City's Higher Horizons (HH) Program, and its subsequently even more generously endowed project "More Effective Schools" (MES) failed earlier to bring underprivileged children up to the norm. Similar endeavors in dozens of other cities proved equally ineffective. Americans deserve credit for trying. Everybody agrees that if compensatory programs could raise lagging children to significant new levels of attainment, and enable them to succeed at better paid occupations, several billions of dollars annually would be a cheap price. Actually, however, large numbers of specially trained teachers, sharp reductions in class size, and large infusions of money, have not helped.

Consider *Project Head Start*, a brilliant and revolutionary idea. It has changed not only the shape of American education, but the relationship of government and the academy from which the idea derived. It was enthusiastically hailed by educators and policymakers as a symbol of social engineering at its best, and was thought to be well worth the \$300,000,000 it cost annually. It is

based on the premise that a child's early years are crucial in learning. Benjamin Bloom in his 1964 study *Stability and Change in Human Characteristics* presented hard evidence validating this thesis. According to Bloom, a child develops half of his intelligence by age four and 80 per cent by age eight. Consequently, the sooner the poor youngster could be exposed to the classroom, the greater the chance he could be redeemed from a life of poverty. How better to break the "poverty cycle" than by giving him a "headstart" in the educational race and eventually, a passport into the blessings of an affluent society.

But while initial results showed an average gain of 8 to 10 points on I.Q. verbal tests, the gain disappeared within a few months. Studies found no lasting progress when Head Start children were compared with other groups.

SCHOOL RESOURCES NOT DOMINANT FACTOR

All this would indicate that the physical and economic resources going into a school have very little relationship to the achievements coming out of it. In short, there seems to be a convincing, though not definite case, for the view that student achievement depends largely on forces over which today's schools exercise little control. This is corroborated on the college level by the results of a research project sponsored by the American Council on Education. Essentially the project suggested that bright students will tend to succeed academically, and less gifted students will tend to do less well, regardless of the intellectual "excellence" of their institutions. The finding, unexpected by the investigators, seems to dispel the popular belief that a student's intellectual development is likely to be enhanced if he attends a top quality institution. In general, the investigators said: "Differences in student achievement were much more dependent upon variations in the student's ability that existed prior to entrance to college than on any characteristics of their undergraduate institutions." So it makes no difference whether your son attends Harvard or Podunk U., because what he has before he enters college is more important to his intellectual development than anything he ever gets from college.

Such a conclusion does not surprise Harry Levin of the Brookings Institution who points out: "The literature on testing suggests that from 60 per cent to 90 per cent of the variance in standardized ability tests, is attributable to genetic differences among individuals." This finding is confirmed by Doctor Arthur Jensen of the University of California at Berkeley in a much-publicized article in the *Harvard Review*. Doctor Jensen contends that various studies of identical twins reared apart have shown evidence of mental ability fixed by inheritance, that Negroes tend to average 15 I.Q.

points below whites, that American Indians, generally considered to be more disadvantaged than Negroes, consistently score higher than Negroes, and that I.Q. gains achieved by compensatory education have not proved to be lasting. Although Jensen inserted several caveats in his article, many people have jumped to the conclusion that the black child's poor school performance is a result of genetic taint. It remains for Jensen's professional peers to subject his study to the critical scrutiny it demands.

CULTURAL AND EDUCATIONAL BACKGROUND

These studies have such powerful racist implications that the Society for the Psychological Study of Social Issues was quick to state: "There are marked differences in intelligence-tests scores when one compares a random sample of whites and Negroes. Nevertheless, the evidence points overwhelmingly to the fact that when one compares Negroes and whites of comparable cultural and educational background, differences in intelligence tests scores diminish markedly; the more comparable the background, the less the difference." In other words, blacks are not inherently inferior to whites — that is, inferior by blood—any more than Jews are superior to non-Jews, although Jews happen to test consistently higher than non-Jews on I.Q. tests administered to a random sampling of Jews and non-Jews.

What, then, can we do? Wait until continued research has resolved the existing heredity-environment uncertainty? Continue to pour money into compensatory programs whose worth seems, up to the present, very questionable? The answer is simply that nobody knows what we should do. Educational science is so primitive it supplies us with very few answers. As yet we do not even adequately know the major components in the learning process, let alone the respective contribution of each component. How much of the whole do we assign to family context — 10, 20 or 30 per cent? To teacher factors such as age, sex, and education? To pedagogy? To the curriculum? To total dollars spent, and how they are distributed? The answers will be a long time in coming. While there seems to be a close relation between parental income and cultural background in children's educational attainment, nevertheless, heredity factors seem to indicate that we can only go so far in educating some children. That is why the Civil Rights Commission's National Education Conference in November 1967 reflected, according to the *New York Times*, a "general feeling of frustration."

All this does not mean that we should give up attempts to offer all children an opportunity to acquire an education to the limits of their abilities, even if this means starting before the child is born.

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Indeed, the Westinghouse report entitled "The Impact of Head Start" advocates an "intervention program which might begin prenatally, with education and medical help to the mother, followed by a program of infant education for the first two years, then by a two year Head Start program, and ultimately by a suitable kindergarten and elementary school experience, all articulated and operating as part of one system."

EARLY INTERVENTION

With this report in mind, President Richard Nixon called for a "national commitment" to an early "intervention" approach for a "healthful and stimulating development during the first five years of life." According to Daniel Patrick Moynihan, Nixon's chief advisor on poverty and education, Head Start is already too late in treating three, four, and five year olds. Poverty must be combated at the roots, in the very cradle. There is some substance to this view, although it is difficult to believe that the Nixon early intervention program will be any more successful than Head Start in having permanent effect.

In this whole matter, certain facts of life must be recognized. One fact is this: Children differ widely in their aptitudes, and no power on earth can make all of them perform at, or near, the norms for their ages. Differences between the more and less gifted widen with age. That is why virtually all countries operate two or more parallel secondary school systems, and why some of our own schools run several "tracks." But in the great majority of American public schools, heterogeneous grouping and automatic annual promotion are common practice, confronting the teacher with the almost impossible task of simultaneously educating in one classroom three or more grade levels.

It is just as wrong and destructive not to segregate children for educational purposes according to their measurable innate capacity as it is to segregate them deliberately by color of skin. It is a basic educational maxim that nothing is so unequal as the equal treatment of unequals. Most European countries run schools, which, for low ability children, combine teaching of basic essentials with training and marketable skills. From a certain age schools provide part-time classroom instruction tied in with apprenticeship training by potential employers. The prejudice against vocational education in this country must be overcome, and the myth destroyed that chronological age is the only criterion by which children should be assigned to schools, classes, grades, and curriculums.

CHANGE OF ATTITUDE NECESSARY

Moreover, there will have to be a change of attitude on the part of parents and educators. They will have to teach the less talented of our children that humble offices are not personally degrading.

Too often boys and girls alike are encouraged to "aim high," and assurances are given them indiscriminately that they can be anything that they choose to become. Indeed, too many believe that there is a natural scale of individual worth—and that this corresponds to the scale of jobs. That is, they think the less worthy a man, the more menial a job he will have, and the more worthy he is, the higher administrative job he will have.

That attitude has a real effect on our educational system. Many of our young people are doggedly seeking the kind of education they don't seem suited for. They shun what they obviously are suited for — particularly if it is working with their hands. They are driving, they hardly know where, to escape being "trapped" in a "lowly" occupation. Arguments by those interested in their welfare are often unavailing with these youngsters. When told to keep their aspirations in line with their abilities, they consider it part of some sort of confidence game designed to keep people in their places. As a result many pupils muddle through studies they shouldn't have been in — or worse fail, and go through life discouraged with what they do.

There are several little tragedies being played out in this situation. First is the tragedy of those who are so busy looking down on others. A financier looks down on a man who paints his office. Eminent physicists walk haughtily by the work of electronic craftsmen. No one is perfect, but such condescension is one of the most pitiful examples of our imperfection. And worse, it leads to the second tragedy which is the discouragement of youngsters from entering the trades. Young people starting out want to do something good; when they hear that what they are naturally suited for is looked down upon, they begin to look for a career that isn't. This in turn leads to the third tragedy — the boy with a natural aptitude for being a fine plumber becomes a mediocre philosopher. As John Gardner states in his book "Excellence" a good plumber is just as necessary to our society as a good philosopher; we need both. (The need for plumbers comes high—in New York City they have just been granted a wage of \$9.34 an hour!)

The low category rating that so many of us give the manual crafts is not only responsible for many students aspiring to be what they aren't; it is also responsible for many workers now in those crafts not fully valuing what they are doing. Many of them consider their work a drudgery instead of a thing that is needed—and a thing of even artistic potential; this is particularly true of such crafts as stone masonry and woodworking. Many of these craftsmen can be observed looking elsewhere for gratification. Sean O'Casey wrote of this a few years ago: "I got a letter from a man who lives

in Calumet City. He begged me to send him used Irish stamps, adding as a hint to me that as well he collected coins, matchbox covers, beer bottle caps, auto club emblems, catalogs and buttons, of which he had 500. Casually he mentions that he is a carpenter. Imagine, abandoning the calm and really beautiful art of carpentry for the feverish collection of rubbish."

DIGNITY OF MANUAL PURSUITS

People do not change their standards quickly—even when they are shown to be rickety. But two statements on the subject bear repeating. One is for those of us who are looking down on those who do manual labor; it is by Mr. Gardner: "Human dignity and worth should be assessed only in terms of those qualities of mind and spirit that are within the reach of every human being." For those of us who are avoiding or disparaging our natural vocation, Socrates has a word. "Harmony and justice," he says, "come both to a city and to a man through each of us doing our own business." He adds that "inwardly and truly a man must do his own business. . . . He must have managed his own well, and himself, have ruled himself, and set all in order and become a friend to himself." So Socrates was the first to advise "do your own thing" — but do it well; and thus he anticipated Polonius who urged his son: "To thine own self be true, and it follows as the day the night, thou canst not be false to any man" (Shakespeare: Hamlet).

Educators should impress upon young people the larger significance of the job at hand, no matter how menial it might be. A man's job becomes more significant when he sees it in relation to the whole. When one is convinced of the worth of what he is doing, he looks upon it not only as a private work but as a post of public duty. He takes pride in the task he is doing, because he sees that it is connected with the welfare of all, and in so viewing it he derives greater satisfaction from a job well done. Too seldom do parents and educators try to develop this consciousness in youth, even though it is a vital element in patriotism, and thus a valid part of the mission of the school. Corny though they may sound, the words of Douglas Malloch express this thought well:

If you can't be a pine on the top of the hill,
Be a scrub in the valley — but be
The best little scrub by the side of the rill;
Be a bush if you can't be a tree.
(Be the Best of Whatever You Are)

OPPORTUNITY FOR ALL

Democracy simply demands that everybody be given an opportunity to use such gifts and talents as God has given him. The pseudo-democratic no-

tion, that all children should be given the same education is detrimental to the welfare of the larger community, and is harmful to the best interests of the individual. Most of us, I am sure, feel that all men are equally worthy of concern. The priceless worth of each individual is a major tenet of all religions. We feel that the economic cripples in our life deserve our sympathy and a fairly shared support. Most of all, we believe that all men should have equal opportunity, and that every citizen should have equal political and civil rights — or have, as the phrase cut into the stone of our Supreme Court building expresses it: "Equal Justice Under Law."

But we must face the fact that we are not born equal. All men are not created equal in ability, in what moves them to do their best, nor in levels of achievement they may reach. I feel that Thomas Jefferson in writing the famous passage of our Declaration of Independence never meant that all men were created equal in talent, and that all men should be rewarded equally by society. After all, there is even inequality in heaven: "In my Father's house there are many mansions." Although all will be completely happy in the beatific vision, it is a basic theological tenet that one's capacity for enjoying God will vary according to how well each one of us lives out the law of love here below. It is not merely a question of whether or not we will get to heaven, but how much of heaven each of us will get.

In his satire "Animal Farm" George Orwell deflates some of the confused ideas about equality. In that book, animals revolt and take over the farm. At first they set up seven commandments, and the seventh is "All Animals Are Equal." Soon, however, the pigs, who are more clever, started to run things, and one day the seventh commandment is changed to read "All Animals Are Equal, But Some Are More Equal Than Others."

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A REAPPRAISAL OF THE MOST CONTROVERSIAL DOCUMENT OF OUR TIME*

The "Coleman Report" Held That The Reason Nonwhite Children Learn Less Than The Whites Lies Outside The Classroom

Three years have passed since James Coleman and his colleagues issued their now famous report on "Equality of Educational Opportunity." Virtually unnoticed at the time of its publication, the 737-page monograph has since become the best-known and most controversial piece of educational research of our time.

Like a veritable Bible, the "Coleman Report" is cited today on almost every side of every major educational controversy, usually by people who have not read it and almost always by people who have not understood what the authors meant when they wrote it. It has been used to support arguments for increasing integration in the schools—and to buttress the position of those who would accept segregated schools with community control. It has been cited as evidence that what black children need is good teachers—and as proof that increases in per pupil expenditure will not close the educational gap between black and white.

The report has also inspired a growing body of scholarly exegesis, interpretation and criticism, so that anyone who wants to know what the report "really" proves must now plow through not only the baffling charts and tables of the original document but dozens of subsequent critiques and re-analyses, most of which are available only in mimeographed form to the cognoscenti. The time has clearly come for a reappraisal.

POLITICAL FOOTBALL

The Coleman Report was a political football from its very inception. Like much American social science, it was initiated in order to avoid confronting a difficult political problem. In the summer of 1964 Congress had decided to pass a civil-rights law which was expected to end *de jure* school segregation in the South by cutting off Federal funds from segregated systems. The question inevitably arose: what about *de facto* segregation in the North? The expedient answer was that the Commissioner of Education should investigate the problem and report back in two years.

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After nearly a year of bureaucratic squabbling and indecision in the U.S. Office of Education, Commissioner Frank Keppel decided to conduct an "Equality of Educational Opportunity" survey. The survey, theoretically covering nearly a million pupils in 6,000 different schools across the nation, was carried out in the fall of 1965. Prime responsibility for planning and analyzing it fell on James Coleman, a distinguished sociologist from Johns Hopkins University with a long record of interest in both education and survey research.

Coleman expected the survey to demonstrate three rather conventional propositions:

1. *Nonwhite pupils, North and South, usually attend different schools from white pupils.*
2. *Nonwhite schools usually have less adequate facilities, inferior curriculums and worse teachers, as well as less affluent and academically adept student bodies.*
3. *Because they attend those inferior schools, nonwhite pupils learn less than white pupils.*

The survey confirmed the first proposition. Black and white pupils are seldom in the same schools, even in the North. Not only that, but the black pupils do learn much less than the white pupils, at least judging by standardized tests of verbal and nonverbal skill, reading comprehension, arithmetic skill and general information. The typical black first grader scores below about 85 per cent of white first graders. This relative disparity persists throughout elementary and secondary school, and thus the absolute difference between black and white children grows wider as they grow older. A 6-year-old who scores below 85 per cent of his classmates is about one-year behind, while a 16-year-old is more than two years behind.

The survey did *not* support the second proposition, that black schools spend significantly less money per pupil than white ones, have substantially larger classes, get worse trained and less experienced teachers, operate in more antiquated and crowded facilities, rely on less adequate textbooks and equipment and so forth. On the contrary, the survey uncovered only one major measurable dif-

ference in these items between black and white schools: the black schools had more black teachers. This means that the black children's teachers also come from poorer homes and do worse on tests of academic ability. Black schools in the urban North also tended to have somewhat older buildings and smaller play areas. In other respects, however, black and white schools proved surprisingly similar. Later analyses, while largely confined to Northern urban elementary schools, have shown that schools which serve rich and poor children also have quite similar facilities, curriculums and teachers.

How could the conventional wisdom have been so wrong? The apparent answer is that claims of discrimination have usually been based on the obvious contrast between Northern ghetto schools and white schools in a few affluent nearby suburbs or in the city itself. In most (but not all) cities, the black schools get short-changed. What all such comparisons evidently ignore, however, is the fact that most white Americans live in smaller (and poorer) cities and towns, where the school facilities, curriculum and teachers leave almost as much to be desired as they do in the big-city ghettos, where most blacks live.

LACK OF CAUSE-AND-EFFECT RELATIONSHIPS

More important, even, was the report's conclusion on the third proposition, the expected cause-and-effect relationship between inadequate school resources and low student achievement. In fact, neither black nor white children of a given family background did significantly better in schools with high expenditures, large libraries, accelerated curriculums and so forth. Coleman and his colleagues believed that pupils did slightly better in schools with experienced and articulate teachers, but even this difference was surprisingly small—and the evidence supporting their belief has subsequently proved to be rather shaky.

The report suggests—though it does not state in so many words—that black children clearly get less satisfactory schooling than white children in only one major respect. If a child happens to have a black skin, the odds are very strong that he or she will end up with classmates from impoverished homes and a plethora of learning and behavior problems. A child who attends such a school may be short-changed even if it has first-rate facilities and teachers. Most black sixth-graders, for example, attend schools in which the majority of their classmates are reading at the fourth- or fifth-grade level. This means that even if a black child has the ability to read at sixth-grade level, he will probably not be pushed to do so. The instruction in his classroom will be aimed not at him but at the laggard majority. Furthermore,

there is reason to believe that children learn more from one another than from their teachers. If black children attend schools where this "informal curriculum" is based on a vocabulary half as large and on concepts far less abstract than in a white school, their chance of developing academic skills is reduced.

Coleman and his colleagues were extremely anxious to determine whether individual achievement was dependent on a school's social composition. After analyzing their data, they concluded that it was, but that a child was influenced by his classmates' social class background and aspirations rather than by their race. This implied that a poor black child would *not* benefit from attending school with poor white children, but that he *would* benefit from attending with middle-class children, black or white. Coleman and his colleagues also tentatively concluded that black children were more sensitive to peer influences than white children. This implied that a black child would benefit substantially from integration, while a white child would suffer very little. The apparent effects of integration were always small, however, relative to over-all differences in achievement between races, socio-economic groups and individuals.

If differences between schools do not account for most of the observed differences in achievement, what does? By far the most important factor measured in the survey was the ethnic and socio-economic background of the individual child. In addition, there is a strong association between children's achievement level and their attitudes. Among black children in particular, there is a marked relationship between their achievement and their personal sense of control over their own destinies. Yet even when family background and attitudes are taken into account, more than half the variations in individual achievement remain completely unexplained. Whether this reflects unmeasured genetic differences in aptitude or unmeasured differences in environmental influence is a matter for speculation. One thing it did not seem to represent, however, was unmeasured effects of differences between school environments. The survey showed that the differences between the best and the worst pupils in the same school are invariably far larger than the differences between the best and the worst schools. Indeed, eliminating all school-to-school differences would only reduce the total variation in achievement by about 20 per cent. This does not definitely prove that schools have no role in generating inequality, since there could theoretically be systematic discrimination against certain kinds of pupils within most schools. Still, it is hard to believe that within-school differences play a large role in inequality

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when between-school differences play such a small role. Coleman and his colleagues therefore concluded that the major reasons for unequal achievement must lie outside the school.

FOCUS OF POLITICAL DEBATE

This brief summary of the Coleman report's major findings hardly does justice to the voluminous text, but it does suggest why the report became a major focus of political debate. The report was published at a time when America was vacillating between two different strategies for helping the disadvantaged. Some people advocated racial and socio-economic integration of the schools—and of the larger society. Others argued that integration was unattainable, undesirable or both; the only realistic strategy was to accept segregation and make black schools as good as white ones. The Coleman Report implied—though it did not say explicitly—that *neither* strategy would help achievement much. But insofar as anything was likely to work, the report seemed to indicate that integration was a better bet than what had come to be called “compensatory” education. Yet at the same time the finding that parental interest and pupil attitudes were strongly associated with achievement seemed to give oblique support to those who believed that parental participation and/or control over all-black schools might make a critical difference to student achievement.

The report's conclusions were inevitably subjected to stringent and sometimes extravagant criticism. The report had been prepared in great haste to meet the Congressional deadline, and the authors had had no time to examine many obvious objections to their tentative conclusions. Skeptics have been able to offer a variety of speculative reasons why the report's conclusions might be wrong, and those who have political reasons for wanting to discredit or ignore the report have naturally found such speculations very persuasive. For the past two years I have been part of a group of Harvard social scientists trying to determine whether any of the hypothetical objections to the report's conclusions are actually correct. My judgment is that the report's broad conclusions were sound, even though many of its specific methods and findings were wrong.

One common criticism of the survey has been that more than 10 per cent of the school districts in the original sample refused to cooperate, including such major cities as Chicago and Los Angeles. Some districts evidently feared that the Federal Government would use the survey to prove they were discriminating against minority groups. Other districts—especially those being sued for *de facto* segregation—feared that minority groups

would get hold of the survey results and use them in court or in the press. Some districts also feared that simply asking questions about sensitive racial issues might stir up trouble in the schools. In addition, many schools in nominally cooperative districts failed to return data because it was too much bother or perhaps—a more serious matter—because they had something to hide. As a result, complete returns were received from only about 60 per cent of the schools in the original sample.

There were clearly some small differences between participating and nonparticipating schools, and selective participation may well have led to a slight underestimate of the qualitative differences between black and white schools. But there is no reason to suppose that nonparticipation led to an underestimate of the relationship between school quality and student achievement.

A second criticism of the survey has been that the information provided by the superintendents, principals, teachers and pupils in the sample schools may not have been accurate. This criticism arose largely because of doubt that black children's teachers and facilities could really be the equal of those given white children. Since the Office of Education made no site visits to check up on the accuracy of replies given by principals and teachers, no definite answer to this charge is possible. Data supplied by state departments of education suggest, however, that the principals' replies about facilities were probably fairly accurate. Direct interviewing of parents in two communities likewise showed that most (though not all) of the pupils' responses were reasonably accurate. And the replies of principals, teachers and students to similar questions show a fairly high level of internal consistency for most “objective” items. On the other hand, questions which involved subjective judgment of any kind did not elicit internally consistent answers. The results of such subjective “attitude” questions must therefore be treated with great caution.

VERBAL ABILITY

A third criticism of the report has been that the authors should not have concentrated on the determinants of verbal ability to the exclusion of reading, mathematics and general information. Those who believe that black people are peculiarly “nonverbal” have even argued that the decision to stress verbal ability was fundamentally racist. Unfortunately, black children did as badly on the tests of other abilities as on the verbal tests. Furthermore, while some individual children did well on one test and badly on another, schools as a whole either did well on them all or badly on them

all. A Northern urban elementary school's mean verbal score, for example, correlated almost perfectly with its mean reading and math scores. Under these circumstances it hardly matters which test we use to measure over-all school achievement.

A fourth line of attack on the report has been more technical. The authors of the report employed a number of dubious statistical techniques and made a variety of mechanical errors in handling and labeling their data. But they also recognized that such errors were likely, given the extreme haste with which they worked, and they were generous in helping others reanalyze the data more meticulously. These analyses have shown that while the report's broadest conclusions were correct, many important details were wrong. In particular, and contrary to what some critics have argued, the net effect of the report's various errors was to *under-estimate* the importance of family background and *over-estimate* the importance of school in determining achievement.

A fifth criticism of the report has been that the authors made unwarranted casual inferences from their one-shot survey, which by its very nature could reveal only patterns of association rather than prove causation. Two examples illustrate the problem.

The report uncovered a strong association between teacher verbal ability and student achievement in secondary schools. Though they listed a number of qualifications, the authors concluded that able high school teachers probably boosted student achievement. Yet the report's data could equally well lead to the conclusion that school systems were assigning able students to schools with able teachers, or that they were assigning able teachers to schools with able pupils. Since we know from experience that both practices are widespread at the secondary level, it seems rash to assume that there need be any direct casual link between teacher ability and student achievement to explain the observed association between the two.

Fortunately, these problems are far less serious at the elementary level. Students are allocated to elementary schools largely on the basis of residence, race and social status, all of which were measured in the survey. With luck and ingenuity the effects of such allocation can be discounted and the effects of various school characteristics can then be estimated. Since there is little evidence that student transfers at the elementary school level are based on ability (as distinct from family background), the mean achievement of first graders entering a given elementary school can also be used to estimate the mean initial ability of sixth

graders in the same school. With these precautions, casual inferences are considerably safer than at the secondary level; and when these precautions are taken, it turns out that facilities, curriculum and teacher characteristics are even less important than Coleman and his colleagues supposed. A student's peers may, however, have a modest effect on his achievement.

Another instance of ambiguous causation was the association between attitudes and achievement. The survey showed, for example, that students who did well on achievement tests were more likely to say that their parents expected them to go to college. The authors concluded that parental expectations probably had an important influence on children's achievement. Yet it would be equally reasonable to conclude that children's achievements had an important influence on their parents' expectations. Most parents know that if their child cannot read competently, he is unlikely to attend college, and the child is likely to be aware of this attitude and report it when asked. This same difficulty arises with all the report's inferences about the effects of attitudes on achievement.

NO CONSENSUS

What, then, is the present consensus about the policy implications of Coleman's survey? The answer is that no consensus exists, even among experts. My own judgments are as follows:

(1) The resources—both fiscal and human—devoted to black and white children's schooling are not dramatically different, except perhaps in certain parts of the South. Nor do we devote substantially greater resources to educating middle-class children than to educating lower-class children.

(2) Variations in schools' fiscal and human resources have very little effect on student achievement—probably even less than the Coleman Report originally implied.

(3) The report's assertion that peers have a consistent effect on achievement may or may not be correct. My guess, based on available data, is that peers *do* have an effect, but that it is relatively small.

None of this denies that unusually dedicated and talented individuals can create schools in which initially disadvantaged children learn a remarkable amount. But it does deny that the achievement levels of large numbers of disadvantaged children can be appreciably enhanced by spending more money, hiring better teachers, buying new textbooks or making any of the other changes that reformers normally advocate.

If improved student achievement is our goal, the Coleman Report's implication is obvious: we must

(Continued on next page)

alter the whole social system rather than just tinker with the schools. There is plenty of evidence that major changes in a child's social and cultural environment will affect his intellectual development, often dramatically. Bruno Bettelheim and others have chronicled the impact of the Israeli kibbutz on hitherto deprived North African and Yemenite Jews. Here in America we know that children raised on Long Island do far better, even in first grade, than those raised in Appalachia. Similarly, children raised in Jewish homes do better than those raised in Christian homes, even in the same city. And the World War II draftees who grew up in the America of 1917-1941 did far better on standard tests than the World War I draftees who grew up in the America of 1900-1917. Intellectual skills are, therefore, not just a function of genetic differences. But neither are they a function of school differences. If the Coleman survey convinces us of that basic truth, it will have served its purpose.

Does this mean that we should simply let inferior schools rot? I think not. Good schools *can* make a difference—if we know what kind of a difference we want them to make.

Underlying the comments of most people who discuss the Coleman Report is the assumption that academic achievement is the most important objective of schooling, and that if school reform does not affect achievement, it is worthless. Yet despite much popular rhetoric, there is little evidence that academic competence is critically important to adults in most walks of life. If you ask employers why they won't hire dropouts, for example, or why they promote certain kinds of people and not others, they seldom complain that dropouts can't read. Instead, they complain that dropouts don't get to work on time, can't be counted on to do a careful job, don't get along with others in the plant or office, can't be trusted to keep their hands out of the till and so on. Nor do the available survey data suggest that the adult success of people from disadvantaged backgrounds depends primarily on their intellectual skills. If you compare black men who do well on the Armed Forces Qualifications Test to those who do badly, for example, you find that a black man who scores as high as the average white still earns only about two-thirds what the average white earns. Not only that, he hardly earns more than the average black. Even for whites, the mental abilities measured by the A.F.Q.T. account for less than a tenth of the variation in earnings.

BEST INDEX OF SUCCESS

With these observations in mind, go visit a slum school and ask yourself what the school is

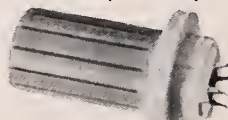
actually doing. You will usually find that it seems to share the employers' priorities. It devotes very little time to academic skills. Instead, the teachers spend their days in a vain effort to teach the children to behave in what they (and probably most employers) regard as the proper way. The teachers' ideas about proper behavior are silly in some respects. Nonetheless, they are probably right in feeling that what their children need first and foremost is not academic skill but such virtues as self-discipline, self-respect, and self-confidence. It is the school's failure to develop these personal characteristics, not its failure to teach history or physics or verbal skill, that lies behind the present upheavals in the schools. And it is this failure to which reformers should be addressing themselves.

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PSYCHIATRY IN THE CHANGING MEDICAL CURRICULUM

Observing Role of Emotions on Cause and Management of Illness Important to Student

JOHN C. NEMIAH, M.D., of Boston Massachusetts. Psychiatrist-in-Chief, Beth Israel Hospital, Boston; Professor of Psychiatry, Harvard Medical School.

In 1851 Henry Mayhew published his monumental *London Labour and the London Poor*.³ As a journalist, Mayhew had spent many hours in the 1830's and 1840's exploring London's slums, befriending and studying the multitude who lived on the economic fringe of society — the costermongers and street-sellers of fruits and vegetables, the boy chimney climbers, the rag-pickers, the ballad hawkers, the bone-grubbers, the cigar-end finders, the sewer-hunters, the "pure" finders, a professional group who collected dog dung from the streets which they sold for use in dressing fancy leather goods.

MAYHEW'S OBSERVATIONS

As he saw, so Mayhew wrote: and as he wrote, he printed his pieces in successive issues of the *Morning Chronicle*, a popular newspaper of the day. It was these that he eventually collected together and gave to the public in his massive four-volume work. His writings were of interest not only because of the statistics he presented concerning the numbers and earnings of the various types of workers he investigated, but even more because of the graphic, often poignant and always vivid prose portraits he painted of the people he met. In instance after instance he took down his conversations verbatim and transcribed them for his readers.

To get the fullness of the flavor let us look at one of Mayhew's vignettes. A particularly distressing group of the many whom he examined were the Mudlarks. These were young boys, often seven or eight years of age, who winter and summer in their bare feet searched the mudbanks of the Thames when the tide was out for pieces of coal and other objects that they might sell for a few pence. He describes in detail one young lad of fourteen whom he befriended and ultimately helped to obtain a good job with a printer:

"The lad of whom I speak," wrote Mayhew, "was discovered by me now nearly two years ago 'mud-larking' on the banks of the river near the

docks. He was a quick, intelligent little fellow, and had been at the business, he told me, about three years. He had taken to mud-larking, he said, because his clothes were too bad for him to look for anything better. He worked every day, with 20 or 30 boys, who might all be seen at daybreak with their trousers tucked up, groping about, and picking out the pieces of coal from the mud on the banks of the Thames. He went into the river up to his knees, and in searching the mud he often ran pieces of glass and long nails into his feet. When this was the case, he went home and dressed the wounds, but returned to the riverside directly, 'for should the tide come up,' he added, 'without my having found something, why I must starve till next low tide.' In the very cold weather he and his other shoeless companions used to stand in the hot water that ran down the riverside from some of the steam-factories, to warm their frozen feet.

"At first he found it difficult to keep his footing in the mud, and he had known many beginners to fall in. He came to my house, at my request, the morning after my first meeting with him. It was the depth of winter, and the poor little fellow was nearly destitute of clothing. His trousers were worn away up to his knees, he had no shirt, and his legs and feet (which were bare) were covered with chilblains. . . ."

He had had to start mudlarking when he was ten to help support the family (his father was dead) when his mother's greengrocer's shop failed.

"Then she was obliged," Mayhew continued, "to take all her children from their school, that they might help to keep themselves as best they could. Her eldest girl sold fish in the streets, and the boy went to the riverside to pick up his living. The change, however, was so great that shortly afterwards the little fellow lay ill eighteen weeks with the ague. As soon as the boy recovered, his mother and his two sisters were taken bad with a fever. The poor woman went into the Great House, and the children were taken to the Fever Hospital. When the mother returned home she was too weak to work, and all she had to depend on was what her boy brought from the river. They had nothing

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*This paper is a revised version of the fourth annual Burgess Oration delivered at the Miriam Hospital, Providence, R.I., April 16, 1969.

to eat and no money until the little fellow had been down to the shore and picked up some coals, selling them for a trifle. 'And hard enough he had to work for what he got, poor boy,' said his mother to me on a future occasion, sobbing; 'still he never complained, but was quite proud when he brought home enough for us to get a bit of meat with; and when he has sometimes seen me downhearted, he has clung round my neck, and assured me that one day God would see us cared for if I would put my trust in Him.' As soon as his mother was well enough she sold fruit in the streets, or went out washing when she could get a day's work. . . . The lad suffered much from the pieces of broken glass in the mud. Some little time before I met with him he had run a copper nail into his foot. This had lamed him for three months, and his mother was obliged to carry him on her back every morning to the doctor. As soon, however, as he could 'hobble' (to use his mother's own words) he went back to the river, and often returned (after many hours' hard work in the mud) with only a few pieces of coal, not enough to sell even to get them a bit of bread. . . ."

SOCIAL REFORM IN ENGLAND

Multiply this single case by hundreds of others like it, and one can see the impact that Mayhew's writing had on his contemporaries. In fact, his volumes were both cause and effect. On the one hand they reflected a rising humanitarian concern with the sufferings of the poor and disadvantaged that extended backwards a hundred years in time. On the other, his reporting heaped fuel on a fire of social reform that had been mounting in intensity during the early decades of the nineteenth century, and his observations inspired men like Charles Kingsley to practical and tangible efforts to relieve the social distress they found all about them.

I should like to review with you briefly certain aspects of the history of social legislation that ensued in the development of English culture (although in our limited time it can be in only the broadest of strokes), since I think there are lessons to be learned from them that have a bearing on the directions currently in evidence in medical curricula.

Charity has always allegedly been a motivating force in Christian society, and from the earliest times the relief of the poor in England was in the hands of the established Church. With the dissolution of the monasteries by Henry VIII, a large number of indigent people were cast adrift upon society, which attempted to deal with the problem by the institution of the Poor Law deriving from Parliamentary Acts passed in the time of Elizabeth I. There was never any question about the

legitimacy of official aid to the aged poor, the sick, the crippled and the orphaned. On the other hand, the extensive group of the so-called able-bodied indigents met with a mixed reception in their need for help. Amongst their number were certainly a number of ne'er-do-wells, criminals and professional beggars, who had always been dealt with severely by laws punishing their activities, and they generally met with little sympathy from the populace at large. But with the increasing dislocations in social structure, in both its agricultural and industrial segments, growing numbers of families became desperately poor as the result of fluctuations in the economy that led to either inadequate wages or outright unemployment.

The latter were not always generously treated by those responsible for social welfare, and the application of poor law relief to their plight was inconsistent and often chaotic. On the one hand there were those who, moved by their humanitarian compassion for the suffering they witnessed among the unemployed poor, felt that they should be aided by the poor law rates. On the other, many maintained that such a dole only fostered pauperism and that the stimulus of hunger would in many instances motivate the poor to find work that they would otherwise shirk if the state subsidized them out of public funds.

In the latter part of the eighteenth century economic conditions had become critical, especially in agricultural areas. The price of food had far outdistanced the capacity of the rural workers to maintain an adequate diet on their meager incomes, and attempts to legislate a minimum wage had failed to pass through Parliament. In the face of growing distress, a group of local magistrates met together in the year 1796 at the Pelican Inn in a village in the Speenhamland area of Berkshire and instituted a scheme that came to be known as the Speenhamland System, which was rapidly adopted throughout many of the counties of England. In essence the system provided that the income of every family be supplemented out of poor law funds to raise it to a level adequate to purchase the necessities of life — in short, they established a kind of guaranteed minimum income.

The magistrates acted with the strongest of humanitarian motives, and the immediate effect of the plan was the widespread relief of misery and starvation, but they did not foresee certain difficulties that soon became evident. The situation was, of course, a complicated one, but two factors were pre-eminent. In the first place as a result of being given relief there was a tendency on the part of some laborers to perform less work, since their minimum income was assured however little they earned. At the same time, banking on the same

assurance, employers lowered the wages they offered with the result that many previously self-supporting laborers were forced to seek poor rate assistance. As might be expected, welfare rates began to soar to astronomical heights and became an increasing public concern during the first decades of the nineteenth century.

PARLIAMENTARY COMMISSION

By the early 1830's the problem had become so acute that a Parliamentary Commission was appointed in 1832 to examine the situation. Their report,⁴ published in 1834, was basically repressive and punitive in tone and advocated stern restrictive measures with regard to the dispensing of what was called "outdoor relief." They recommended the extensive establishment of work-houses for the indigent that would be so bleak and unattractive that any individual would seek poor rate relief only as a last desperate measure. They cited as evidence in favor of their recommendations the lowering of poor rates where stern welfare measures had been taken, and they gave numerous examples of behavior that reflected for them the demoralizing effect of the indiscriminate doling out of relief.

Here, for example, is a portion of the evidence presented by a Mr. Booker, Assistant Overseer of the Poor (the Overseer was a prototype of today's Welfare Worker) for the Parish of St. Botolph—without—Bishopgate: "The change that is made in the character and habits of the poor by once receiving parochial relief, is quite remarkable; they are demoralized ever afterwards. . . . The deterioration in the character and habits of persons receiving parochial relief, pervades their whole conduct; they become idle, reckless, and saucy. . . ." If they were admitted into the workhouse as a prelude to helping them find work, "They were never so refractory, and behaved so ill, that the old people petitioned to be relieved from them: they would beat them, or steal their victuals, or sing indecent songs in the open yard, and so as to be heard by everyone on the premises, and would annoy them in every way, besides doing everything they could to plague the master and mistress of the house. . . ." If they were refused relief, "it was no uncommon thing for them to beset my house, . . . they remain at the door and cannot be removed except by force. They claim relief, not at all as a matter of favour, but as a matter of right." In the country parishes, they often intimidated the overseers by smashing his farm machinery and setting fire to his crops if he refused them relief, so that, as one witness reported, "the power of the paupers, over the funds provided for their relief (was) almost absolute, as regards any discretion on the part of the overseer." If an attempt was

made to require those admitted to workhouses to do some work, they objected violently; ". . . (they) said," a witness relates, "that they did not come in to work; they merely came in until they could accommodate themselves, until they could get themselves another situation; but they would not remain to work, indeed, that they would not; they would take a room and keep themselves when they were out of place, sooner than put on a dress and be made to work! One refractory person said, 'the poor were not going to be oppressed by work.'"

There could be no doubt of the hardship and suffering that resulted from the restrictions in poor law aid that followed the Commission's Report. Husbands were separated from their families, children from their parents, and anyone desperate enough to apply for public aid was subjected to indignities and demeaning conditions that moved many to suffer their misery in silence rather than seek help. But though the poor law rates were effectively reduced in many areas, the problem of poverty remained and a mounting chorus of concern (of which Mayhew was one once) was heard in the years that followed the Report.

CHARITY ORGANIZATION SOCIETY

Nor was there vocal protest alone. A legion of private charitable agencies sprang up, within and without London, each trying in its own way to help the disadvantaged and destitute. By mid-century the number of these created a veritable jungle of uncoordinated helping hands, and the lack of organization and reduplication of efforts in many instances only made the situation worse. As an antidote there arose, through the initiative of a small group of philanthropists, an organization that became known as the Charity Organization Society (or, more popularly, the C.O.S.), the purpose of which was to introduce order into chaos and to help the proper selection of candidates for charitable assistance.

As one reads the writings of those involved in the C.O.S., one is struck by a moralistic tone that is heavily Victorian in its accents. They divided applicants for relief into two large categories: the "deserving" and the "undeserving." Into the latter category fell all those individuals who appeared to have brought misfortune on themselves by "defects" of character and behavior such as alcoholism, laziness, dissolute living, and profligacy. These were immediately adjudged unworthy of help, which was reserved for the "deserving"—those basically honest, upright and proper souls whose unfortunate plight appeared to be the result of external circumstances over which they had no voluntary control.

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The approach to the latter (the "deserving") was determined by a principle that was at the core of the C.O.S.'s attitude toward human behavior and character. Each individual must be helped in such a way that he would be able to re-establish his own independence and self-sufficiency. This was clearly evident in the opinions and writings of a woman who was not only a prime moving force in the C.O.S., but was important in the establishment of activities that grew into the profession of Social Work. Octavia Hall was a kindly, somewhat aloof and utterly altruistic woman whose watchwords were "independence" and "self-reliance." She said of herself,¹ "I detest any sort of dependence. It is almost hard for me even to imagine a person of whom I could, for myself, ask any assistance." Of the poor she wrote, "I feel most deeply that the disciplining of our immense poor population must be affected by individual influence; and that this power can change it from a mob of paupers and semi-paupers into a body of self-dependent workers."² Through her influence, and that of the small like-minded group with whom she worked, the C.O.S. developed its characteristic approach to poverty: It attempted to assist the unfortunate client back to self-sufficient independence through a sustained, supportive, and understanding personal relationship with a charity worker, whose help consisted not only of tangible goods but of the equally important elements of friendship, counselling and emotional support.

From the point of view of the development of poor law theory and practice, the C.O.S. introduced two important elements. 1) First of all they made explicit an important psychological consideration that had been implicit but essentially unformulated in the century of controversy over poor law procedure and legislation. They recognized the central importance of both human dependency needs and drives toward independence, as these had complicated the reactions of the poor to legislation aimed at helping them and had at the same time frequently elicited violent and conflicting responses in those who were trying to help—responses of compassion for suffering on the one hand and punitive repression of dependent behavior on the other. 2) Secondly, the C.O.S. emphasized the importance of taking into consideration the individual human being and his unique psychological needs and personality in any attempt to provide assistance. Although before this many philanthropists had been moved to action by the touching plight of individuals, their programs had generally been aimed at the problem of poverty rather than at the difficulty of any single person. Their actions had taken the form of social legislation that ignored individual needs and the com-

plexities of the human personality, and too often such legislation ran aground on those overlooked but important reefs.

Although the C.O.S. attempted to make up for the conceptual deficiencies of their predecessors, their psychological understanding was too limited and too unsophisticated a tool to deal adequately with the complicated problems that faced them. In the first place, by relegating many applicants for help to the category of "undeserving," they denied any attempt at assistance to at least a half of the population needing it. Furthermore, although they proved to be successful in rehabilitating many people, more often than not those judged "deserving" of help did not respond to their measures and failed to regain an independent status, without showing any obvious flaws in their character structure that could account for such a failure.

UNDERSTANDING OF HUMAN PSYCHOLOGY

It required later developments in the understanding of human psychology that arose out of clinical psychiatric experience to help to explain the nature of these failures, and I should like to turn now to a brief discussion of the concepts involved in such an understanding through the consideration of a modern patient.

Carl B., a construction worker of 37, had been injured by a fall at work some three years before his admission to a Boston hospital. Shortly after injury he had been operated on for a herniated L-5 disk and had at the same time had a fusion of his lumbar spine. Despite what appeared to have been successful surgery, the patient continued to complain of steady back pain and had remained totally incapacitated for work ever since. During his stay in the Boston hospital he was noted by his doctors and nurses to be unusually demanding, helpless and dependent, and on one occasion, when a nurse had been slow to give him a back rub he had asked for, he became angry enough to threaten to sign out of the hospital.

This behavior of his and his continued pain and incapacitation was curious on two counts: 1) In the first place, extensive examination failed to reveal a local disturbance in his lumbar area sufficient to account for his difficulties. 2) Secondly, prior to his injury he had been an unusually strong, active, effective person who loved hard outdoor work. He prided himself on accepting as a challenge the most dangerous assignments, and would volunteer for jobs that were too difficult for his fellow workers to accomplish. He boasted of the injuries he had sustained in the past without being forced to take time off from work because of them. No situation daunted him or caused him to worry, and he emphasized how important it was for him to be independent and self-sufficient. "I don't like

to be waited on unless it's really necessary," he said. "I'd rather do it myself. I'd rather try it alone. You might say I like to be independent. I'd just as soon do it myself rather than to ask anybody. I *know* I'm foolish that way."

His wife confirmed the fact that he had been just the strong, brave, effective, independent person he told us he had been — she felt that in reality he had been too much so. What was particularly interesting was that the patient *still* believed he was this kind of person, despite his three years of incapacity and invalidism and demanding helplessness. He blamed all his trouble on his injury and his pains. He constantly stated, "I'd go back to work tomorrow if it weren't for these pains" — pains, which we must keep in mind, for which at this point no physical cause could be found.

How are we to understand and explain this seeming paradox between his perception of himself and others' perception of his behavior? Let us focus first on the patient's behavior and personality before he was injured. What strikes us is that his position of strength and independence is extreme. He recognized this himself when he said "I *know* I am foolish that way." What we usually find in people with this kind of exaggerated independence is a strong underlying need for dependency and help, which they are afraid to admit to themselves, which they consider a weakness and a danger, and of which they are not consciously aware.

For such people any kind of wanting to rely on others, of desiring help, is dangerous — they will, they fear, be let down, deserted, and abandoned to a position of helplessness and hopelessness that is distasteful, frightening, and totally unacceptable. As a consequence they avoid situations of needing or asking for help and lean over backwards to be totally the opposite in an exaggerated stance of utter self-sufficiency and independence — a stance that keeps the underlying dependency needs in check and effectively hidden from themselves — the characterological defense mechanism of reaction formation.

It is important to keep in mind that such people are in reality often unusually effective in their lives and their work. They are conscientious, can be consistently relied upon, and will undertake dirty and dangerous jobs that others avoid, which they usually bring off successfully. At the same time, however, this very personality structure makes them potentially vulnerable to illness or injury, and we must look for a moment at what happens when such an event occurs.

In the first place, a serious injury or illness in reality forces them into a position of inactivity —

that is, the protective pattern of excessive activity and independence is forcibly removed from them. At the same time, the underlying dependency needs are encouraged into the open, since, because they are sick or injured, all kinds of people martial around them to help — doctors, nurses and other caretakers give aid to their ailing bodies, and family and friends rally around sympathetically to do what they can to help. What is more, the patient can often accept the help in such circumstances. In his view, his injury or illness is not his fault — it is a stroke of fate that comes from outside, for which he is not responsible. He can still maintain his image of himself as a strong, independent person, who is the victim of circumstances beyond his control. He can now gratify his previously submerged dependency needs around symptoms for which he can disclaim any responsibility, and without having to recognize that he himself as a person *wants* to be dependent. As one patient said, "I didn't quit my job, my *legs* did."

The symptoms now become a central focus in a new psychological equilibrium and allow the patient to gratify his dependency without any loss of face or self-esteem or change in his image of the kind of person he is or wants to be. In other words, psychological motivations and physical bodily lesions are combined in the production of symptoms, in particular the symptom of pain. Unfortunately, long after the physical lesion is healed, the symptoms are often prolonged and maintained by the psychological factors alone, and the patient retains his pains and remains helplessly incapacitated, not because of continued bodily pathology, but because a new psychological equilibrium has become fixed in which the symptoms play a central part in gratifying dependency needs of which the patient is still unaware and which he vigorously rejects consciously. The patient is, in other words, suffering from psychological invalidism; and this regressive reaction, as it is often called, becomes fixed, and frequently becomes very difficult to reverse and may incapacitate the patient for months, even years.

It is particularly important to recognize that this shift in psychological equilibrium usually takes time to develop, and it is often in our power as physicians to determine whether it will occur or not. If one fosters the factors that encourage the underlying dependency into the open, one can put his patient in the jeopardy of developing a regressive reaction. Many forces may conspire to do this, such as those arising from doctors who are too protective of their patients or too fearful of their becoming active again too soon, or families that are over-solicitous. If industrial compensation

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and litigation are in the picture, lawyers may urge their client not to return to work until he is completely well; and the patient is paid compensation while he is sick — that is, he is paid for having symptoms. All these factors conspire to strengthen the underlying dependency needs. Since it is extremely hard to reverse once it is fixed, the significant clinical approach to the regressive reaction is one of prevention. This means that the doctor must be aware of the importance of psychological factors in illness, and he must know the nature of his patient's personality structure and whether he is a potential victim of psychological invalidism. In other words, he must have a knowledge of psychological functioning and psychopathology if he is to institute a therapeutic regimen that will be ultimately helpful, not harmful to his patient..

RELEVANCE OF SOCIAL AND CLINICAL OBSERVATIONS

Let us pause at this point to examine the relevance and relation of the social and clinical observations that have been thus briefly reviewed. If one reflects for a moment on the activities of the social reformers, it becomes evident that their method of approach was that of dealing with a problem (of poverty, for example) and of dealing with it by means of measures that were uniformly applied to large groups of people. They were painting with broad strokes in primary colors without regard for the subtleties of line and nuances of shade that constitute individual differences among single human beings. To them the problem seemed simple: supply the poor with goods or money and their troubles would be over. They failed to recognize what effect such sweeping actions indiscriminately applied might have on the psychological functioning of individual people since they paid no real attention to psychology. They failed, therefore, to recognize that an uncritically applied dole, by fostering and encouraging dependency needs, could be psychologically damaging and demoralizing to many of the recipients. Or, when welfare rates rose, they reacted with punitive countermeasures that again failed to take individual needs into account and created further human misery and suffering.

The approach of the Charity Organization worker was an improvement in that he was concerned with helping individual people rather than aiming legislation at large impersonal masses. But he, too, had his difficulties owing to the unsophisticated state of his knowledge of psychology. He tended to approach his clients with preconceived and rigid moralistic notions of behavior and to deal with everyone in the same way without regard for the complexities of human nature that make human reactions so varied and diverse. He did not have

the capacity to adapt his procedures flexibly to the differing needs and personalities of his individual clients.

It is just here that the psychologically sophisticated clinician has an advantage over his predecessors. If he is aware of the facts of psychic structure, if he has knowledge of the nature of psychological conflict, and if he can allow himself to explore and examine in depth his patient's emotions, needs, impulses and fantasies — if, in other words, he can take into account the experiential side of human life, he is in a position to understand the seeming paradoxes and perversities of human nature and to provide his patients with the kind of psychological as well as physical help they need to get better. Or in the event that he cannot bring about improvement, at least he can minimize emotional suffering and avoid doing things that may actually make his patients worse.

This is amply illustrated in the clinical case described earlier. In exploring a single individual in depth, it became apparent that the psychological factors of dependency and independence were at work within the person, and existed in relation to one another in a dynamic psychological equilibrium that was capable of response to environmental stress and change. Such a concept of psychological structure provides a framework, not only for understanding and supplying the needs of individual patients, but in a larger fashion for understanding some of the phenomena that have puzzled our predecessors. We can, for example, see how an indiscriminate dole, by fostering dependency needs, might lead, in people so disposed, to a preference for more passive modes of living that could in time become intense, demanding and fixed, to the ultimate detriment of that individual and of the social fabric as a whole.

One must not, however, think in either-or terms. The social legislator and reformer, and psychologist of the individual complement one another, and both are needed by society. The reformer on the one hand can point to the larger social problems needing attention; the psychologist on the other can help the reformer to frame his legislation in such a way that it will take into account the psychological needs and structure of the individuals composing society.

IMPORTANCE IN MEDICAL CURRICULUM

It is only recently that these issues, always of importance in the larger sphere of social problems, have taken on relevance for the smaller world of the medical school and its curriculum. The psychological approach to the individual patient has, of course, for some years been a part of the medical student's education, and some have felt that it was a useful antidote to what has been called the

"dehumanization of medicine." As the scientific (especially biochemical) knowledge concerning human biology has increased, the care of the patient has tended to become more impersonal, and many have looked on the clinical discipline of psychiatry as an important element in maintaining the humanistic character of medical practice.

In the last two or three years, in response to students pleas to make their pre-medical education more relevant to their goal of becoming physicians, many medical schools have revised their curricula so that each student is introduced in the early months of his first year to the problems of the sick patients. He has been given the opportunity to talk with patients and their families in a variety of clinical settings, and in this context early in his career to learn the art of interviewing and listening, and to see the importance of emotional factors in the genesis and management of physical illness.

As these changes were being made, a new actor appeared on the medical stage. With rather startling suddenness, a concern for what is broadly termed "social medicine" has put in a strong claim for the attention of students and faculty alike. The problems of the distribution of medical care, of the economics of medicine and the social responsibility of the physician are currently demanding large amounts of time and energy from all of us and are tending to shift our interest from the individual patient to the society of which he forms a part. There is already a pressure in the newly fashioned curricula to expose the students in their early months to the study of systems of medical care, of the sociology and economics of medicine, and of kindred subjects at the expense of the time originally designed to introduce them to and help them to deal with individual beings.

I do not mean to derogate the importance of these social issues and the behavioral and social sciences that provide the tools for studying them, and clearly a place must be found for them in the curriculum. What concerns me is that just as psychological medicine has begun to play a significant part in the students' medical curriculum, it finds itself endangered by the newly risen pressure of social medicine, in which the individual is an impersonal statistic. There is danger that the trend toward dehumanization begun by the rise of the biological sciences will be compounded by the demands of the social. We seem poised for a great leap from biochemistry to sociology, vaulting completely over any concern for the individual and leaving us exactly where we started. We are possibly exposing ourselves and our medical programs to all the dangers that, as I have tried to show you by an excursion into social history, beset the

reformer who thinks only in terms of problems, not of individual people.

PSYCHOLOGICAL STATE OFTEN CRUCIAL

There are numerous factors conspiring to this end, not the least of which is the fact that it is easier to deal with people in an impersonal way. It is painful for all of us to bear with and empathize with our patients' pains and anxieties and griefs, and all of us try to find ways of dodging them, whether by fleeing to the laboratory or by focusing our attention on the faceless mass and anonymous social ills. But, as I have tried to emphasize in the more clinical part of this paper, it is just this aspect of the sick human being that the clinician has to keep clearly in view to be helpful to his patients, for it is so often the patient's emotions and fantasies, how he views his world, how he perceives his relationships and his symptoms, that uniquely determine his individual response to his illness. His psychological state is often the crucial factor in whether a patient gets better or worse, and all students must be made to see and understand its importance and must be helped to develop and master a psychological approach in the earliest phase of their training.

With the recent innovations in medical curricula that permit beginning students to see and interview patients and their families, and to observe the role of emotions in the cause and management of illness, the way is now open to achieving that goal. We must be careful not to lose it.

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ADJUVANT HORMONAL THERAPY IN BREAST CANCER

Author Believes Proposal for Adjuvant Estrogen Therapy Has Not Been Described

Continued and increasing interest in the treatment of breast cancer is evident. Recurrence after surgery in favorable cases remains too high. The patient with recurrence may have in addition to extended surgery, x-radiation or radium therapy; change of hormonal status by removal of various endocrine organs; or treatment with various hormones, corticosteroids, or chemotherapeutic agents.

CASE REPORT

This is a case of recurrent breast cancer treated with estrogens. The patient, now 79, at age 69 had been subjected to radical mastectomy for adenocarcinoma. No positive glands were found in the specimen. Eight years after surgery four or five 1.5 cm. nodules were found at the operative site. Biopsy of two of these nodules revealed adenocarcinoma similar to that of the primary tumor. There was no other positive evidence of recurrence. Treatment with diethylstilbestrol 50 mg. was started at once and was continued with fair regularity for two years, and then continued at 5 mg. daily for the ensuing 1½ years. The local areas of recurrence disappeared completely within three weeks after estrogen therapy was started and have remained clear. The most recent x-ray survey three years after the start of therapy reveals no evidence of metastatic disease although there was some pleural effusion. Her general condition and cardiovascular status showed some decline.

DISCUSSION

This was an ideal case for estrogen therapy for treatment of recurrent mammary carcinoma, having an 8 year free period after surgery and being of the postmenopausal group. Similar response to estrogen has been noted by many observers. Patients intolerant to stilbesterol may have Premarin® in comparable dosages (3mg. t.i.d.).

A PROPOSAL FOR ADJUVANT HORMONAL THERAPY

Experimental studies on the endocrine aspects of cancer appeared in the literature of the 1930's. In the 1940's, recognition that estrogens might be effective in advanced breast cancer was prompted by C. B. Huggins, who demonstrated their great value in cancer of the prostate. Among the many articles appearing on hormone therapy in breast cancer during this period those published by the

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late Drs. G. W. Taylor and I. T. Nathanson of Boston are cited with frequency.

Many urologists use estrogens as an adjunct to surgery of prostatic cancer in selected cases.¹ It is my contention that preoperative estrogen therapy may also have a place in surgery of breast cancer in certain cases, specifically in a woman at or after the menopause with a tumor of grade III or IV, chiefly adenocarcinoma, and with x-ray studies negative for visceral or osseous spread. Tumors of grades I and II, such as medullary carcinoma, which rarely metastasize, are not suitable. The contralateral breast should be checked routinely. Biopsy is most important and necessary before any therapy is undertaken. Aspiration biopsy may give the desired information. Memorial Hospital of New York City has used this type of biopsy in many patients for 30 years or more and reports no increased hazard from its use. Incisional biopsy with careful technique may be used. After positive pathological diagnosis and prior surgery, estrogens may then be started promptly and continued for three months. Stilbesterol 5 mg. t.i.d. would be the usual dosage. The hormone preoperative period should be followed at once by radical mastectomy. Estrogens would then be resumed immediately after surgery for a period of 4 to 6 years. Follow-up examinations for any local, visceral, or osseous spread should be made at 4 month intervals. It is most important that water balance be checked as fluid retention occurs in patients on estrogen therapy and may cause serious medical complications if not given attention.

It is hoped that the general ideas given here for adjuvant surgical hormonal therapy in menopausal breast cancer be considered and studied as a research project. The writer finds no reference in the literature to the above described plan.

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ACKNOWLEDGEMENT

I wish to acknowledge the assistance of Miss Doris Johnson, Librarian of the Rhode Island Hospital.

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FASHIONS IN MEDICINE

Like the ebb and floww of ladies' fashions (e.g. mini- midi-, and maxiskirts), styles in medicine and surgery come and go.

The Commission on Professional and Hospital Activities (CPHA), whose primary goal is the accumulation of statistics for professional activities studies (PAS) and medical audit (MAP), from time to time publishes surveys which are revealing of trends in medical practice.

It has recently (August, 1969) released a listing of the fifty most frequent operations in 1,118 PAS hospitals in 1967. This was based on 6.9 million operations on 7.9 million patients discharged from the hospitals that year. The eight most frequently performed procedures were 1. tonsillectomy and/or adenoidectomy, 2. dilatation and curettage of uterus, 3. appendectomy, 4. excision or destruction of a skin or subcutaneous lesion, 5. repair of inguinal hernia, 6. total hysterectomy, 7. cystoscopy or urethroscopy, and 8. cholecystectomy. The procedure in fiftieth place was advance-

ment or recession of eye muscle. A perusal of the list reveals no striking surprises. It is of interest, however, that a few procedures on the list would probably not have made it a few years back: cerebral arteriography in place no. 33, other arteriography and venography lasted as no. 38, and esophagoscopy and gastroscopy placing no. 46.

A further sign of the times was the absence of two procedures which had just barely made the list in 1965 or 1966, or both, namely partial or subtotal thyroidectomy and partial or subtotal gastrectomy. It is quite possible that neither will ever return to the top 50. Surgery for toxic goitre has largely yielded to radioactive iodine and drugs, while that for adenoma has become less aggressive. The advent of vagotomy and gastric drainage for ulcer and the sharp decline in the incidence of gastric carcinoma have contributed to the decline of gastrectomy.

Thus do fashions in medical practice respond to changes in medical technology and disease patterns.

THE POT BOILS

Published elsewhere in this issue are papers by Father Joseph L. Lennon of Providence College and Professor Christopher Jencks of the Harvard University Graduate School of Education on the effects of educational opportunity on performance. The former looks at Head Start and the latter at the controversial Coleman Report. Both raise serious questions about some dogma current in educational circles.

Other doubts have also been expressed. Professor Arthur Robert Jensen of the University of California, writing in the Harvard Educational Review, asks "How much can we boost I.Q. and scholastic achievements?" His conclusions are generally negative, creating much dismay among those who have taken a more optimistic view. He is quoted as saying (N.Y. Times Magazine, Aug. 31, 1969) "that the long history of the I.Q. test cannot be overcome by these recent bursts of criticism. The reliability of the Stanford-Binet test is 95 per cent, with a 5 per cent error, due to such things as the subject's not being up to par when he took the test. This test is more reliable than TB diagnosis based on chest X-rays."

He continued: "I.Q. predicts scholastic performance better than any single factor or personality trait. The higher the I.Q., the higher the performance. Below 75 he will not get a high school education (though he might get a diploma), and

below 90 it is doubtful. A good I.Q. is necessary for school success, and this in turn stands at the heart of our technological civilization, which in its simplest terms depends on the ability to manipulate symbols and reason abstractly from them. Not all people with high I.Q.'s succeed in school or in life, of course; other qualities are also needed. The I.Q., however, as a thermometer, explains why children differ in school, and there is no better measure, when used properly, to indicate the factors involved in these differences."

Those holding to a contrary view remain active. Two psychologists reported at the recent 77th annual convention of the American Psychological Association evidence that learning ability of inner-city children can be improved by transferring them to suburban schools, indicating that environmental factors can influence learning significantly. Their conclusions were based on an experiment in which 266 grade-school pupils from the slums of Hartford, Connecticut — three-fourths of them non-white — were placed in affluent suburban schools and assessed after a two-year period. The children, originally from the first three grades, showed a "significant" growth in most learning abilities tested, as compared with 305 other inner-city children used as controls.

It will probably be several years before the many conflicting threads of evidence can be sorted out, but in the meantime the educational pot boils.

TREASURES

The library of the Rhode Island Medical Society is a repository of many treasures. It has benefited from the gifts of members since founding of the society in 1812. The story of its ups and downs has been well told in the official history of the Society published a few years ago. The excellence of the library is attributable to the foresight and dedication of Doctor George Dallas Hersey, Librarian of the Rhode Island Medical Society from 1880 to 1912. A unique feature of the library is the Davenport Collection of extra-professional writings of physicians initiated by the gift of Doctor James Henry Davenport (1862-1928) of his own collection of such works.

While the library has no actual incunabula (books printed before 1501) its oldest volume misses this prestigious status by only one year. The most recent acquisition of old and valuable books was the bequest of Doctor Madelaine Ray Brown, a physician and illustrious native of Rhode Island, but never a member of the Rhode Island Medical Society. The library is generally conceded to be a distinguished resource in the community. These treasures have been carefully catalogued and tended with loving care by Mrs. Helen DeJong

and her faithful predecessor, the late Grace E. Dickerman.

Dedication and loving-kindness, however, are not enough. Much can be done by traditional methods to preserve valuable volumes. Leathers can be treated with appropriate preservatives. Bindings can be restored by bookbinding specialists. Proper covers can be provided. Even these simple measures require manpower and funds. Both are in short supply at the library. More important, however, in this modern era is the provision of adequate temperature and humidity control. The best environment for books is not necessarily the same as that for people. With many valuable volumes slowly deteriorating from exposure to the alternating heat and humidity of summer and the heat and dryness of winter central heating, it is high time that provision be made for their effective preservation. Air conditioning of the library building as a whole is a desirable goal. The separate needs of the residents of the stacks may be considered at the same time. We solicit the early attention of the officers of the Society and of the trustees of the library to this urgent need.

RHODE ISLAND HONORED

The recent appointment of Arthur F. Hanley, Executive Director of Rhode Island Blue Shield and Blue Cross, to the new HEW Task Force on Medicaid and related problems is a tribute to the efficient management of Rhode Island Blue Shield and Blue Cross and brings honor to Rhode Island. The Task Force, under the chairmanship of Walter J. McNerney, President of the national Blue Cross Association, will deal with the crisis in the Medicaid program. Among its objectives will be:

- a. Development of utilization review procedures, incentive reimbursement methods, and standards of medical care;
- b. Development of better procedures to assist

states in determining eligibility for medical and public assistance, simplifying eligibility determinations, and more accurately predicting costs; and

- c. Development of a stronger administration on the federal level, and assistance to states and localities in better controlling programs and improving technologies of medical assistance management.

Arthur Hanley's long experience in the field of prepayment and reimbursement and his role in raising Rhode Island Blue Shield and Blue Cross to a high level of excellence should make him a valuable member of the Task Force. We wish him well in this new enterprise.

HISTOCOMPATIBILITY TYPING CENTER

A Human Histocompatibility Typing Center was recently established under the sponsorship of the NIH National Cancer Institute to facilitate transplantation of organs and matched blood components to cancer patients.

The center analyzes tissue samples and computer-stores information on tissue types so that it will be possible to locate compatible donors whenever NCI patients require white blood cell or blood platelet transfusions, or bone marrow transplants. By facilitating the testing of cell fractions, the center will also open the way to large-scale prepa-

ration of special proteins called transplantation antigens which may in the future be administered to permit effective transplantation of unmatched tissue and organs.

The center, a privately owned biomedical research firm under contract to NCI, will conduct cell typing tests similar in principle to blood typing tests. The tests will identify transplantation antigens present in the tissue of patient or donor. Foreign transplant antigens on transplanted tissue cause the rejection of donor organs and tissues.

It is estimated that 50 to 60 samples from NCI

patients, their relatives, and NIH Blood Bank donors will be analyzed each week. The new laboratory will be able within hours to type a patient's tissue and locate donors with a compatible type for tissue transplantation.

White blood cell and platelet transfusions will now be possible in patients with aplastic anemia and acute leukemia. Bone marrow transplants in acute leukemia patients who do not respond to conventional therapy and in other cancer patients whose marrow is depleted as a result of intensive drug treatment will also be facilitated.

Immune rejection of grafted tissue remains a problem central to transplantation immunology. Although tissue typing is a valuable method of matching donors and recipients and helps prevent rejection by reducing the immunological differences

between them, its application is presently limited because compatible donors are difficult to find.

Some workers have concluded that an ideal way to suppress transplant rejection would be to use soluble transplantation antigens to induce specific tolerance. Preliminary studies in animals indicate that, if foreign transplantation antigens are administered in low doses (a procedure somewhat similar to allergy immunizations), the immune mechanism of the body will become tolerant and accept a transplant from an individual bearing those antigens. It is anticipated that work in this field will be carried out at the center.

The new project undertaken by the National Cancer Institute opens many new avenues in the field of transplant technology.

WILLIAM P. BUFFUM, M.D.

The late William P. Buffum, M.D. has been honored by the American Academy of Pediatrics with its 1969 Bret Ratner Award in Pediatric Allergy. Dr. Buffum, a member of the Rhode Island Medical Society for 46 years and a former secretary from 1941-1946, was selected to receive the award prior to his death on August 14.

The Award, given for outstanding achievement in the field of pediatric allergy, will be presented posthumously during the Academy's annual meeting, October 18-23 in Chicago.

Named for the late Bret Ratner, M.D., F.A.A.P., a pioneer in pediatric allergy, a Fellow of the Academy, and a founder of the Academy's Section on Allergy, the Award consists of a gold medal and \$1,000.

Dr. Buffum was honored for his extensive follow-up study of 18 patients with severely-handicapping intractable asthma. In his study, Dr. Buffum found that fourteen of the eighteen patients were of the very allergic type and were easily sensitized. Dr. Buffum also reported on recur-

ring asthmatic bronchitis or bronchitis as relates to later asthma.

Based on the findings of his study, Dr. Buffum emphasized that repeated attacks of wheezing should be considered to be asthma unless some other cause can readily be found. He stressed the importance of asthma being treated properly and thoroughly at the beginning, particularly in cases where wheezing is continuous or when the asthma attacks are frequent and severe.

Dr. Buffum, who was retired from active pediatric practice, was chairman of the Subspecialty Board of Allergy of the American Board of Pediatrics from 1951-56. He was also chief of pediatric service at Rhode Island Hospital from 1940-50. Dr. Buffum, up to the time of his death, was consulting physician at Rhode Island Hospital as well as at Providence Lying-In-Hospital, Charles V. Chapin Hospital, and Miriam Hospital. He had also served as consulting physician at Memorial Hospital of Pawtucket, and Our Lady of Fatima Hospital in North Providence.

TWO SENTENCE ESSAY

There is an awesome theatricality about today's radicalism. They have fallen victim to an old and naive doctrine — that man is naturally good, humane, decent, just and honorable, but that corrupt and wicked institutions have transformed the noble savage into a civilized monster.

... John W. Gardner, former Secretary of HEW

SMOKE SIGNALS

Cigarette smokers lose more time from their jobs because of illness than non-smokers, 1969 government data show.

Men who are heavy smokers lose twice as much time as those who smoke little or not at all.

Women who smoke two packs a day lose 2.5 times as many workdays as those women who don't smoke.

— Health Insurance Institute

LEONHARD RAUWOLF, M.D.

The Physician-Botanist Honored and Reappraised

Rauwolfia serpentina has been extensively studied since 1931 by chemists, pharmacologists, and clinicians for its action in drastically reducing the biogenic amines of the brain. Its potent action as a hypotensive agent marked the beginning of effective management of arterial hypertension. Leonhard Rauwolf was honored in 1703, almost two hundred years after his death when Charles Plumier first designated the genus and species "*Rauwolfia serpentina*." The name became established when Carl Linnaeus included it in his great "Species plantarum." These honors came to Rauwolf in acknowledgement of his pioneering collection and publication of series of plants of the Near East. These he collected and described in the book of his travels first published in 1552. Due to the renewed interest in the plant bearing his name, he has again been honored: a new biography by Karl H. Dannenfeldt has been published by the Harvard University Press. This is the second in the Harvard Monograph History of Science series, now under the general editorship of Ernest Meyer. This is a distinguished book, unencumbered by footnotes; there are, however, eighty pages of scholarly notes and appendices. It abounds in place names and personalities of the sixteenth century; yet these are all so skillfully introduced in proper place and pertinence that there is no perpetration of pedantry.

The life of Rauwolf emphasizes the botanical tradition in medicine, and the tradition is rich. Although the teaching of botany to medical students is now defunct, it is easy to recall the names of many great botanist-physicians, such as Benjamin Waterhouse, the distinguished Professor of the Theory and Practice of Physic at Harvard who earlier was Professor of Natural History and lecturer in Botany and Mineralogy at Brown University, and whose greatest work *The Botanist* was published in 1811 and was dedicated to United States President John Adams.

Perhaps too Solomon Drowne, M.D., with his Botanical Garden at Mount Hygeia in Foster, Rhode Island, should be mentioned. He was a contemporary of Waterhouse. In 1811 he was Professor of Botany and Materia Medica at Brown University, and, in a sketch of his life a fellow physician says: "His attention to botany was directed not more to the philosophy of science than

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to its practical uses in agriculture and medicine. It may truly be said that no individual in the state has equalled him in those practical applications. . . . As a popular lecturer on botany, Doctor Drowne has probably never been equalled in this country. His various knowledge, fine Classical taste and lively imagination eminently qualified him to illustrate and embellish the science of which he was an enamoured votary from his early youth." In addition to the Botanical Garden at Mount Hygeia, he established the first Botanical Garden at Brown University.

The elimination of botany from the required curricula in the premedical or medical years is understandable. Yet reflection on the fact that *Rauwolfia serpentina* marketed as Raudixin® is nothing more than the biologically standardized ground root of the plant, and that the purified alkaloids, Serpasil®, Reserpine® and Reserpoid® are mere extracts of the root, focuses attention on the historic role of *Materia Medica* in medicine. Much of our therapeutics until the recent age of organic synthesis was dependent upon plant extracts. This frequently made the recognition of the plants themselves essential to practice and lent importance to a knowledge of botany in the training of physicians in Medieval and Renaissance times. It was foremost in the required corpus of knowledge, just as biological and physiological chemistry are today. Botany was not recognized as a separate science until well into the eighteenth century. All of the great botanists until the eighteenth century were physicians; for botany consisted essentially of the study of medicinal herbs, especially of those plants which were found to have a distinct, or even more a potent pharmacological action. Every one of the great fifteenth, sixteenth, and seventeenth century botanists was a physician. Three of the most famous were associated with the Botanical Garden in Leyden, although the first great botanical garden connected with a medical school was founded in Padua early in the sixteenth century. Leyden's garden was begun a scant twelve years later by a close friend and a constant correspondent of Rauwolf named Charles de L'Ecluse, whose name is found in the literature in its Latinized form of Carolus Clusius. He served for fif-

(Continued on Page 575)



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LEONHARD RAUWOLF, M.D.

(Continued from Page 574)

teen years as court physician at Vienna, but the enticements of the academic life and more adequate financial remuneration induced him to go to Leyden where he established the first famous Botanical Garden. A hundred years later these gardens became even more famous when they were enlarged and perfected by the great Boerhaave, who was Professor not only of Medicine and Chemistry, but also of Botany. In addition to developing the Botanical Garden, Boerhaave published the words of the great French Botanist, Vaillant. Attracted to this botanical tradition was Carl Linnaeus of Sweden, who founded the modern nomenclature of taxonomy. Carl Linnaeus was both a botanist and Professor of Medicine. Benjamin Waterhouse, Professor of Natural History at Brown University, and Professor of the Theory and Practice of Physic at Harvard could hardly have done otherwise than lecture in botany at both colleges having been trained as he was at Leyden.

It is not strange then that Leonhard Rauwolf in addition to being a successful practicing physician specialized, as modern doctors do, in one aspect of his medical training, the science of Botany, even concentrating on the subspecialty of the tropical and sub-tropical plants of the Near East.

Rauwolf was born in 1535 in Augsburg, Bavaria. After completing his basic education he wrote in his notebook that he desired to travel to the best German, French and Italian universities where "the study of medicine was especially strong, and where I could find the plants that were necessary to a medical education." He received his college education at the University of Wittenberg where he matriculated in 1556. Four years later in the fall of 1560, he entered the medical school at Montpellier which was a direct offshoot of the great University of Salerno. At this time it had the greatest medical faculty on the Continent of Europe, where were assembled the most noteworthy, if not the most notorious brains of the pre-Renaissance. The great Rabelais was in residence. He was teaching his classes in original Greek. One must recall that the capacity to read Greek at the beginning of the Humanist movement was limited to a handful of men. We can not pass by the name of Rabelais without realizing that he was chastized and put in solitary confinement because of his heresies of merely investigating Greek and the Greek tradition. But it was at Montpellier where Rabelais taught his most famous course, Hippocrates's "The Prognostics," a contemporary of Rabelais was the most distinguished natural philosopher, Rondelet, Professor from 1551 to 1566. It was he who influenced the entire subsequent career

of Rauwolf. Rondelet introduced Rauwolf to the great Latin and Greek botanists. There was Dioscorides whose "De Materia Medica" was the standard text, although first published about 100 A.D. His teaching included the reading of Theophrastus' (287 BC) "Historia Plantarum," and "De Causis Plantarum." Pliny's "Historia Naturalis" completed the texts. Fortunately for Rauwolf, the Arabic physicians still had some influence. In the works of Avicenna and Rhazes plants seen in his travels through Mesopotamia and the Levant States were first noted. It was Pasteur who said that "chance favors the prepared mind," and Goethe who said, "Man sees what he knows," and with a foreknowledge from his reading of the Classical authors and the Arabic physicians, not only was a keenness to travel in the Near East instilled in Rauwolf, but his trip was infinitely more profitable and intellectually rewarding by recognition. Throughout the notes of his travels he records where specimens were first encountered in his reading.

The medical degree was obtained from the University at Valence in 1563. This was followed by a botanical expedition through Italy and Switzerland before settling down as City Physician of Augsburg. Ten years later, however, he wrote: "From my youth I had the strong desire to go to foreign lands, especially those of the Orient, as these were more famous and more fruitful than others, in which the mightiest potentates and monarchs of the world lived and ruled in the past; not only to verify the life, manners and customs of the inhabitants, but also much more to discover and to learn to know the beautiful plants and herbs described by Theophrastus, Dioscorides, Avicenna, and Serapion in the location and places where they grow; partly that I might more exactly describe them, especially the most strange and rare; partly also, to provoke the apothecaries to try to procure those that are necessary for them to have in their shops." Not only did Rauwolf have the desire, he also had the means in that his brother-in-law was in foreign trade, running a fleet of ships between Marseilles and Tripoli under trading rights and agreements with the Levantine States. The major published work of Rauwolf is an account of these three years of travel which took him by horseback from Augsburg, through Italy to Marseilles on the Mediterranean. Thence he cruised on a commercial sailing ship the entire length of the Mediterranean to Tripoli. From Tripoli he made a land crossing to Aleppo to Raqqa, and thence down the Euphrates to Baghdad. A secondary excursion to the Holy Land is further described.

(Continued on Page 577)

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you may agree
it makes good sense)



Indications: Tybatran (tybamate) has afforded symptomatic improvement in a variety of psychoneurotic disorders, especially in the treatment of the anxiety and tension components of psychoneuroses. Anxiety states manifested somatically have responded to Tybatran (tybamate).

Tybatran (tybamate) has been useful in the control of agitation in the aged and in the alleviation of some of the adverse emotional accompaniments of senility.

Tybatran (tybamate) has been used with benefit in the treatment of depressive symptoms associated with anxiety and other symptoms of psychoneuroses. However, it is not indicated for primary treatment of depressive states. It is not an antipsychotic agent, although it has been used as adjunctive therapy in some psychotic patients.

Dosage: One 350 mg. capsule, 3 times daily and two at bedtime is suggested as the adult starting dose. Adjust to suit individual requirements. Daily doses above 3000 mg. are not recommended.

Contraindications: Known hypersensitivity to tybamate. Since no studies have been done with this drug in human pregnancy, it should not be used in pregnancy unless the potential benefit outweighs the risk.

Warnings: Administer cautiously to patients receiving phenothiazines or other CNS depressants or having history of convulsive seizures (See Adverse Reactions). Consider possibility of additive actions with alcohol or other psychotropic agents, particularly phenothiazines or MAO inhibitors.

Precautions: Avoid abrupt withdrawal after prolonged use, although withdrawal symptoms have not been reported to date. Exercise caution in addiction-prone individuals. If symptoms of hypersensitivity occur, discontinue at once and initiate appropriate symptomatic treatment. Avoid activities requiring optimal mental alertness if drowsiness or vertigo are present. As with any new drug, use cautiously in patients with history of drug allergies, blood dyscrasias, and hepatic or renal disease; periodic measurements of hepatic, hematopoietic and renal function should accompany prolonged and/or high doses.

Adverse Reactions: Most frequent reactions, rarely requiring discontinuation of tybamate, include drowsiness, dizziness, nausea, insomnia, and euphoria. There have been a few reports of skin rash, urticaria, and pruritus. Rare side effects include hyperactivity, fidgetiness, flushing, and tachycardia, suggesting excessive stimulation; also ataxia, unsteadiness, confusion, feeling of unreality, "panic reaction," fatigue, headache, paresthesias, vertigo, gastrointestinal disturbances, glossitis, and dry mouth. Grand mal or petit mal seizures have been reported in a few hospitalized psychotic patients receiving tybamate (up to 6000 mg. daily) together with phenothiazines and other psychotropic agents, but not with tybamate alone. Consider the possibility of rare, serious adverse reactions such as may occur with the related drug, meprobamate. If excessive amounts are ingested, gastric lavage and symptomatic therapy, including central stimulants as necessary, are recommended. Before prescribing, consult package circular.

Supply: Tybatran (tybamate) is available in green, sealed capsules of three strengths: 350 mg., 250 mg., and 125 mg. Each strength is supplied in bottles of 100 and 500.

LEONHARD RAUWOLF, M.D.

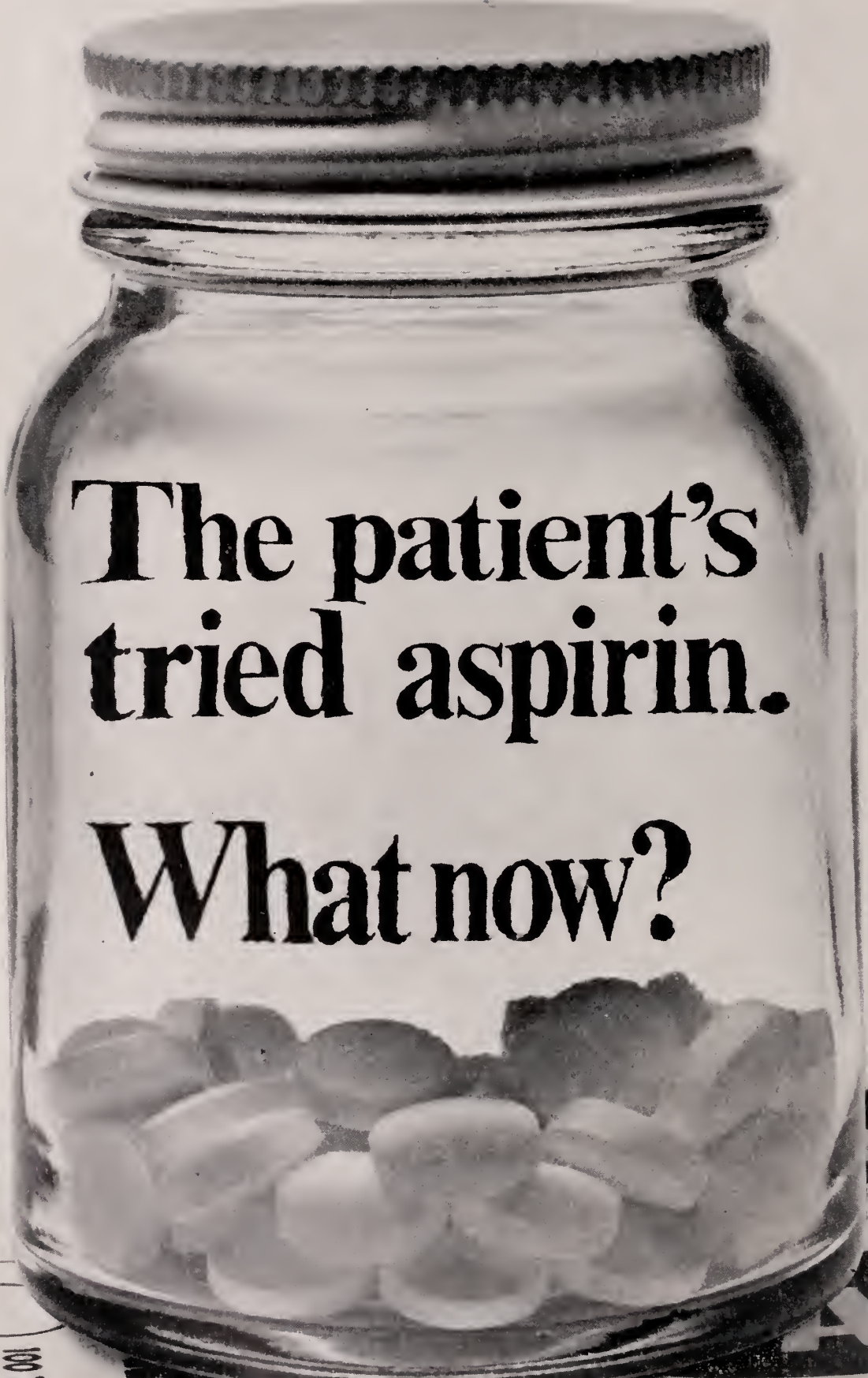
(Concluded from Page 577)

Karl H. Dannenfeldt in his biography has in a sense paraphrased and rewritten Rauwolf's original account. All the original observations on the flora, customs, sociology, ethnology, and the personal adventures are all skillfully recorded, but much has been gained from the exposition by Dannenfeldt rather than by a mere literal translation of the diary. The fruits of his trip was a collection of over six hundred specimens of the plants of the Near East which were collated in his famous "Herbarium." After the death of Rauwolf this herbarium came into the hands of the king of Bavaria, and remained there during the Thirty Years War. It next found its way to Sweden, and remained there until 1665 when the Queen of Sweden gave the herbarium to her favorite, the court librarian, Isaac Vossius, who when he moved five years later took it to London. In 1688, just short of a hundred years after Rauwolf's death, the herbarium with its close to seven hundred species of plants was purchased in London for thirty-two thousand florins, and brought to the University of Leyden. It was made famous by the great botanist, Gronovius, when he republished the collection under the scientific nomenclature of Carl Linnaeus, who as we have already mentioned had his training under Boerhaave, at the University of Leyden.

The very name of Augsburg in the sixteenth century calls forth the religious controversies of the time. Augsburg was the site of the famous "Confession," and until 1588 was Protestant. A return to Roman Catholicism by the court occurred in 1588. Typical of the times, religious conformity to the state religion was a necessity, and Rauwolf lost his position as City Physician. He then removed to Linz, Austria, and remained there until 1596 when again he felt the urge to travel, and joined with the Austrian army in its campaign against the Turk in Hungary in 1596. While on this military campaign he contracted severe dysentery, and died. The most fitting testimony to Rauwolf is the closing paragraph in Dannenfeldt's book which is taken from the Dedication in Rauwolf's Travel Book of 1572.

"So those who make the attainment of skill in the . . . liberal arts their principal end and the study thereof their delight are not deterred from prosecuting this design by any distances of places, by winter or summer, fearing neither rain nor snow, nor the traversing of horrid deserts, or wild and roaring seas, nor the wasting or weakening of their patrimonies, if at last they can but arrive at those places, where they may gain the acquaintance and familiarity of the

(Concluded on Page 586)



**The patient's
tried aspirin.
What now?**

100 TABLETS

There's a good chance your patient needs more than a non-prescription analgesic for pain relief. Especially after self-medication has failed.

Because continuing, increased pain and discomfort may in part be a reflection of anxiety, Equagesic is worthy of consideration. In a single, non-narcotic preparation, it helps relieve pain . . . and associated anxiety and tension.

Tablets

Equagesic[®]

(meprobamate and ethoheptazine citrate with aspirin) Wyeth

IN BRIEF

Contraindications: History of sensitivity or severe intolerance to aspirin, meprobamate or ethoheptazine citrate.

Warnings: USE IN PREGNANCY: Safety for use during pregnancy or lactation has not been established; therefore, it should be used in pregnant patients or women of child-bearing age only when the physician judges its use essential to the patient's welfare.

Precautions: Keep out of reach of children. Not recommended for patients 12 years old or less. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use of meprobamate in susceptible persons—as alcoholics, ex-addicts, severe psychoneurotics—has resulted in dependence or habituation. Withdraw gradually after prolonged excessive dosage to avoid possibly severe withdrawal reactions including epileptiform seizures. Warn patients of possible reduced alcohol tolerance, with resultant slowed reactions and impaired judgment and coordination. If drowsiness, ataxia or visual disturbances (impairment of accommodation and visual acuity) occur, reduce dose. If symptoms persist, patients should not operate machinery or drive. After meprobamate overdose, prompt sleep, reduction of blood pressure, pulse and respiratory rates to basal levels, and hyperventilation are reported. Give cautiously and in small amounts to patients with suicidal tendencies. Treat attempted suicide (has resulted in coma, shock, vasomotor and respiratory collapse and anuria) with gastric lavage and appropriate symptomatic therapy (CNS stimulants and pressor amines as indicated). Two instances of accidental or intentional significant overdose with ethoheptazine and aspirin have been reported. These were accompanied by CNS depression (drowsiness and lightheadedness) but resulted in uneventful recovery. On basis of pharmacologic data, CNS stimulation could

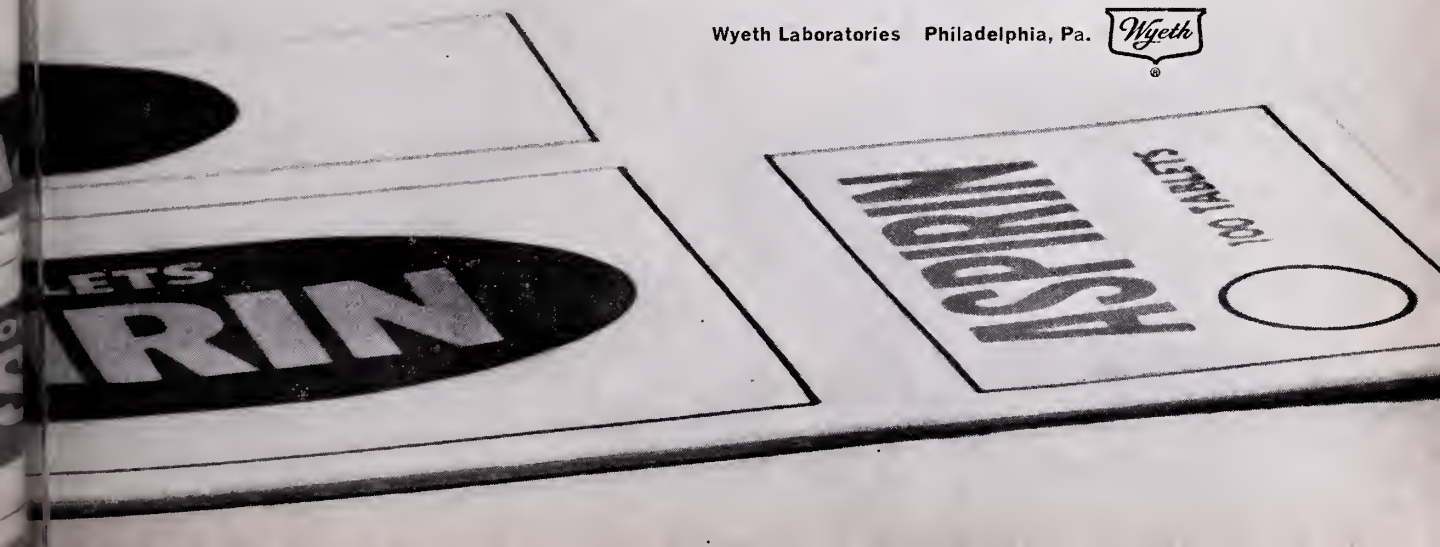
be anticipated, with nausea, vomiting and salicylate intoxication (requires induced vomiting or gastric lavage, specific parenteral electrolyte therapy for ketoacidosis and dehydration, and observation for hypoprothrombinemic hemorrhage [usually requires whole blood transfusions]).

Adverse Reactions: Ethoheptazine and aspirin may cause nausea with or without vomiting and epigastric distress in a small percentage of patients. Dizziness is rare at recommended dosage. Meprobamate may cause drowsiness, ataxia and rarely allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses. Such patients may have had no previous contact with meprobamate and may or may not have an allergic history. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. If allergic reaction occurs, discontinue meprobamate; do not reinstitute. Severe reactions, observed very rarely, include fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. These cases should be treated symptomatically including, when indicated, such medication as epinephrine, antihistamine and possibly hydrocortisone. A few cases of leukopenia, usually transient, have been reported on continuous use. Rarely, aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia have been reported, almost always in presence of known toxic agents.

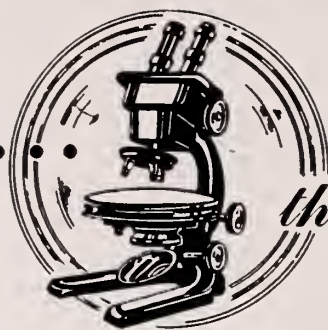
Overdosage: See precautions section for management of overdosage.

Composition: 150 mg. meprobamate, 75 mg. ethoheptazine citrate and 250 mg. aspirin per tablet.

Wyeth Laboratories Philadelphia, Pa.



THROUGH .



the Microscope

LONGEVITY OF UNITED STATES SENATORS

Senate: literally a council of elders, from the Latin *senex*: elder. In this century United States Senators have indeed been more of a council of elders than those who served in the first 56 Congresses, but the life expectancy of those in office since 1930 has fallen significantly short of that for white males in the general population. During the 69 years that elapsed between the outbreak of the Civil War and 1930, the longevity of United States Senators closely approximated that of white males in the general population.

This conclusion is drawn from a study of the longevity of 1,619 men elected or appointed to the United States Senate from the time of the First Congress of the United States in 1789 through the First Session of the Ninetieth Congress to the end of 1966. During this 178-year period, 1,416 Senators died, 223 of them (about 16 per cent) reportedly passed on while in office; four deaths were due to assassination, three resulted from duels, and one occurred in a Civil War battle. The nine women Senators who served during this period are not included in the study.

Expectations of life for the deceased Senators at the time of their first taking office were calculated on the basis of special cohort mortality tables for the white male population of the United States. Such tables, prepared in the Statistical Bureau of the Metropolitan Life Insurance Company, trace the changing longevity over the calendar years following each Senator's accession to office. For white men born prior to 1840, it was assumed that mortality rates in the United States conformed substantially to those shown in the Wigglesworth Table and English Life Table No. 2. From 1840 on the mortality rates assumed were those developed by P. H. Jacobson in his paper "Cohort Survival for Generations Since 1849" (Milbank Memorial Fund Quarterly, July 1964) but with modifications designed to reflect the fact that since about 1955 the death rates of white males in the United States have shown virtually no change.

Over the entire period since 1789, the average duration of life of deceased Senators from the

time they took office was 1.3 years less than might have been expected on the basis of contemporaneous mortality rates in the general population. The longevity of Senators in relation to that of white males in the general population has varied considerably over the years, as shown in the accompanying table. The 571 Senators who took office prior to the Civil War lived on the average 2.3 years less than did the white males in the general population during the same period. By way of contrast, the Presidents who served before Lincoln lived on the average about .3 of a year longer than white males in the general population.¹ The most favorable longevity record among Senators was achieved by the 392 men who took office between 1861 and 1900; they lived on the average .6 of a year longer than white males in the general population during the same period. The 309 Senators who took office between 1901 and 1930 and died before the end of 1966 also on the average outlived white males in the general population, but only by an average of .3 of a year.

The 144 Senators who took office after 1930 had the poorest longevity record; they fell short of the contemporaneous life expectancy of white males in the general population by 5.9 years. This record may reflect the increased pressures on and more onerous duties of our legislators in the depression years, during World War II, and over the period when the United States assumed global responsibilities.

The mortality rates among Senators since 1930 are actually more unfavorable than appears from the comparisons made with white males in the general population, because in the recent past Senators have more often than not been drawn from the higher socioeconomic segments of the population which have experienced a mortality rate below that of all white males in the United States — about 10 per cent lower in 1950.² Even more pointedly, a recent followup study³ of men in the 1950-51 edition of *Who's Who in America* indicates that prominent men have been subject to mortality rates as much as 30 per cent below those for all

(Continued on Page 581)



**symptoms of mixed anxiety-depression are rarely clear-cut...
but they are often a clear indication for**

**Mellaril®
(thioridazine)
25 mg. t.i.d.**

effective in mixed anxiety-depression and in moderate to severe anxiety

Before prescribing or administering, see Sandoz literature for full product information, including adverse reactions reported with phenothiazines. The following is a brief precautionary statement.

Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree.

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.



Mild ulcerative colitis may be triggered here...



In mild ulcerative colitis, a number of factors can precipitate an attack: for instance, dietary indiscretion, such as eating raw foods, or emotional overreaction, such as that aroused by financial difficulties. No matter what causes the patient's sensitive colon to "act up," he soon suffers from acute discomfort...and often, from anxiety and apprehension as well. Such patients frequently respond well to adjunctive dual-action Librax® therapy.

Librax combines, in a single convenient capsule, the well-known antianxiety effect of Librium® (chlordiazepoxide HCl) and the dependable anticholinergic/antispasmodic effect of Quarzan® (clidinium Br). Therefore, as Librax helps to relieve the patient's excessive anxiety and reduce his overreaction to stress, it also,

at the same time, helps to control hypersecretion and hypermotility, thus relieving spasm and abdominal discomfort.

With Librax, the dosage schedule is simple: 1 or 2 capsules, t.i.d. or q.i.d., will in most cases bring the patient significant relief of both the emotional and physical elements that contribute to his psychovisceral disorder.

Before prescribing, please consult complete product information, a summary of which follows.

INDICATIONS: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

CONTRAINDICATIONS: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide HCl and/or clidinium bromide.

WARNINGS: Caution patients about possible

combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide HCl) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), follow discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibitory effect on lactation may occur.

PRECAUTIONS: In elderly and debilitated patients, limit dosage to smallest effective amount to preclude development of ataxia, oversedation, confusion (not more than two capsules per day initially; increase gradually as needed and to

or here.



Though generally not recommended, if combination therapy with other psychotropics is indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and thiazines. Observe usual precautions in presence of impaired renal or hepatic function. Adverse reactions (e.g., excitement, stimulation and acute rage) have been reported in psychotic patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variations in effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

ADVERSE REACTIONS: No side effects or reactions have been reported with either compound when clidinium hydrochloride is used alone, but drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These

are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver-function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diet.

two good reasons for prescribing **LIBRAX**[®]

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.



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Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

*heavenly relief
for unearthly cough*

Benylin[®]

EXPECTORANT

Each fluidounce contains: 80 mg.

Benadryl[®] (diphenhydramine hydrochloride, Parke-Davis);

12 grains ammonium chloride;

5 grains sodium citrate;

2 grains chloroform; 1/10 grain menthol; and 5% alcohol.

An antitussive and expectorant for control of coughs due to colds or of allergic origin, BENYLIN

EXPECTORANT is the leading cough preparation of its kind.

BENYLIN EXPECTORANT

tends to inhibit cough reflex...

soothes irritated throat membranes.

And its not-too-sweet, pleasant raspberry flavor makes BENYLIN

EXPECTORANT easy to take.

PRECAUTIONS: Persons who

have become drowsy on this or

other antihistamine-containing

drugs, or whose tolerance is not

known, should not drive vehicles

or engage in other activities re-

quiring keen response while using

this preparation. Hypnotics, seda-

tives, or tranquilizers if used with

BENYLIN EXPECTORANT

should be prescribed with caution because of possible additive effect.

Diphenhydramine has an atro-

pine-like action which should be

considered when prescribing

BENYLIN EXPECTORANT.

ADVERSE REACTIONS: Side

reactions may affect the nervous,

gastrointestinal, and cardiovascu-

lar systems. Drowsiness, dizziness,

dryness of the mouth, nausea, ner-

vousness, palpitation, and blurring

of vision have been reported. Al-

lergic reactions may occur.

PACKAGING: Bottles of 4 oz.,

16 oz., and 1 gal.

Parke, Davis & Company

Detroit, Michigan 48232

PARKE-DAVIS



THROUGH THE MICROSCOPE

(Continued from Page 580)

white males in the general population; government officials (including Senators) within this group recorded death rates 20 per cent lower than those of white males in the general population.

The average age at which Senators took office for the first time has increased over the years. Prior to the Civil War the average age of Senators was 45.4 years, rising to 49.9 years for the men who became Senators between 1861 and 1900. Since the turn of the century the average age of Senators has been about 52 years. Two octogenarians became Senators for the first time: Andrew Jackson Houston, of Texas, in 1941 at the age of 86, who died within two months, and John Wolcott Stewart, of Vermont, who assume office in 1908 at the age of 82 and lived to be almost 90 years old. Senator Cornelius Cole of California, who was elected Senator in 1867 at age 44 and served one six-year term, lived to be 102 years old and thus holds the record as the longest-lived Senator.

... Reprinted from the *Statistical Bulletin* of the Metropolitan Life Insurance Company, Vol. 50, May, 1969

¹Presidents and Their Survival. Statistical Bulletin, April 1969

²Guranick, L.: Mortality by Occupation and Industry Among Men 20 to 64 Years of Age: United States, 1950. Vital Statistics-Special Reports. National Vital Statistics Division. Vol. 53, No. 2, September 1962

³Quint, J. V. and Cody, B. R.: Preeminence and Mortality: Longevity of Prominent Men. Given before the Annual Meeting of the American Public Health Association, November 13, 1968. A summary was also published in Statistical Bulletin of the Metropolitan Life Insurance Company, January 1968

* * *

ROBINS GIVES \$50 MILLION TO UNIVERSITY OF RICHMOND

At the conclusion of commencement exercises in June, the president of the University of Richmond announced that E. Claiborne Robins, president, A. H. Robins Company, an alumnus of the school, had given his alma mater \$50 million dollars.

So far as could be learned, this is the largest single gift by an individual in the history of American education. The gift consisted of \$40 million dollars in stock, (1,030,000 shares) in the A. H. Robins Company and a challenge gift of an additional \$10 million dollars is to be given on a dollar matching basis, with gifts to be solicited from private sources and alumni of the school.

In discussing his gift, Mr. Robins said, "Education is the most important thing a man can have. This gift represents a vote of confidence in the present generation."

(Continued on next page)

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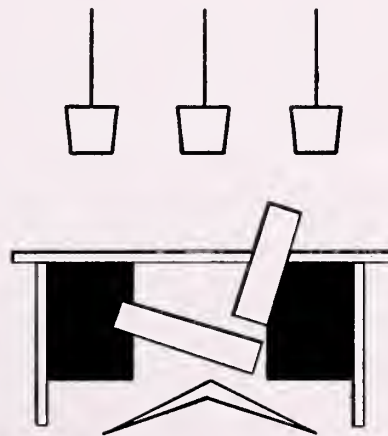
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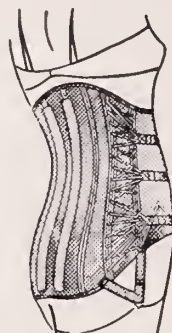
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Get relief from postural strain and many back conditions with a high degree of comfort. Three sets of adjustment straps permit "form-fit" control to suit individual needs. Elastic insets allow free movement for the wearer. "Cushioned for Comfort," this fine Freeman garment features downy soft Dacron-Pima Cotton. Easy to wash and dry. Cushioned stays.

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Mr. Robins emphasized that there are "no strings attached" to his gift, that the University's trustees (a group of which he is a member) are to decide how to use it for the educational betterment of the school. He further explained that his idea is not physical growth of Richmond into another giant educational plant, but strengthening of the school's faculty, library facilities and laboratories. Robins further said that for many years he had dreamed of making the University of Richmond a "truly outstanding educational institution."

Mr. Robins said the purpose of his gift is to enable the present student generation, as well as future students, to enjoy the benefits of a university with resources to employ the best educators, educational techniques and equipment. Mr. Robins also hopes that his gift will spur similar donations to colleges throughout the country, so that the nation's private educational system may be strengthened and improved.

CANADIAN MEDICAL CARE ACT PROVES TO BE COSTLY VENTURE

Arthur F. W. Peart, M.D., general secretary of Canadian Medical Assn., told the American Association of Medical Society Executives the Canadian Medical Care Act, equivalent to universal Medicaid, has created gigantic financing, taxing, health manpower and health care delivery problems. "Despite the warnings that the program would create problems and the fact it was strenuously opposed by the provinces, physicians, and organizations concerned with health care, the program was implemented simply because it was considered politically expedient. It is further proof that governments don't learn from the mistakes of other governments on the subject of wasteful, universal health care schemes. The right answer is to provide such services only to those who need it, rather than to all."

STUDY NEW ENGLAND DENTISTS' DEATH RATE

The death rate of New England dentists from all causes has been less than the rate expected from that of the New England white male population and the U.S. physician population, according to a report published by the Division of Radiological Health of the Public Health Service. The study was based on 11,478 white male dentists practicing in New England from 1921 to 1960. Cancer mortality has been significantly less than, and mortality from cardiovascular diseases about equal to, that of the general population. Suicide was the only cause of death among the dentists with a greater than expected mortality throughout the study period. There appeared to be no relationship between mortality and exposure to ionizing radiation. The report, Mortality of New England Dentists 1921-1960, is Public Health Service Publication No. 999-RH-18.

TEN QUESTIONS TO TRY EXPERTS

Stump any insurance agents lately?

The Health Insurance Institute has prepared 10 key questions you can put to your agent to check the adequacy of your health insurance.

According to the Institute, it's your agent's job to have the answers to any and all of your health insurance queries. You may, but you really shouldn't be able to stump him.

And it makes sense for you to ask about your current insurance coverage so that you can be confident that you and your family are protected against today's high medical care costs.

Here's a list of what you should know — and can ask your agent—about your health insurance:

1. What provisions have been made against personal income cut off as a result of illness or accident?
2. Exactly what costs will your insurance handle. Will it cover related hospital expenses such as X-ray, laboratory tests and other extras? Does it provide for physicians' services both in and out of the hospital?
3. What members of your family are covered?
4. Does your policy provide convalescent care coverage?
5. What provisions are there for extended care coverage in your plan?
6. What are the maximum benefits, in terms of amount and length of time?
7. How do these benefits compare with the level of health care costs in the local community?
8. What are the waiting periods of exclusions specified in your policy?
9. What deductibles and percentage of coinsurance are involved?
10. In an individual policy, who has the right of renewal of coverage — the policyholder or the insurance company? And what is the reason for this?

GROUP DENTAL HEALTH INSURANCE PASSES EXPERIMENTAL PHASE

Dental insurance is rapidly gaining public acceptance.

It has gone beyond the experimental stage, according to the Health Institute.

Dental insurance, considered a pipe dream less than a decade ago, has become generally available through group insurance companies.

Dental plans now insure some four million persons — and coverage is expected to increase.

Insurance companies alone provide this insurance for nearly 2½ million people. Last year the companies paid nearly \$54 million in benefits to their policyholders.

A decade ago questions had been raised about
(Continued on next page)

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

Contact Gardner C. Borden, C.P.C.U.



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As a matter of fact, we have more than 1600 different types of wines from which to choose. That's one-third more than you'll find in any wine store in New York.

If you're not familiar with the proper choice of wine, we'll be glad to help you select just the right vintage for any occasion.

Join our Vintage Guild.

Membership is free.

We're specialists in wine and have many doctors as customers. When you sip one of our fine wines, we know you will say, "Ah-h-h."



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the feasibility of insuring dental care and whether there was sufficient public demand for coverage. But pilot programs showed the coverage could be written soundly, and that large segments of the public are interested in being insured.

The current approach to provide specific protection against the costs of dental care is quite broad.

Today, practically all forms of dental care are covered, including oral examinations, X-rays, fillings, cleaning, extractions, inlays, bridgework, dentures, oral surgery, anesthesia, treatment of gum diseases, root canal therapy and orthodontics.

Dental coverage usually includes the cost of care for conditions that existed before the insurance was issued, and may follow the pattern of major medical coverages, including the absence of a fee schedule in some cases.

INDEPENDENT BUSINESS OWNERS DIVIDED ON QUESTION OF NATIONAL WELFARE STANDARDS

The proposal to establish national welfare standards in order to make state payments to the needy more uniform has elicited divided opinion from the nation's independent business owners.

The National Federation of Independent Business, which polled entrepreneurs in every state, reports majority support for national welfare standards in eight states which are among the most liberal in public assistance programs. These include California, Illinois, New York and five northeastern states.

National standards and supplemental Federal money would end the wide disparities between state programs which exist today. New Jersey provides \$56 a month child support while Mississippi pays only \$8.35 per child, for example.

But predominantly negative reactions came from businessmen in the other 42 states, with dissent heaviest in the South and several Rocky Mountain states. Totalling all the responses, the Federation found that only 39 per cent of the businessmen favor national welfare standardization, while 53 per cent oppose this plan, and 8 per cent are undecided.

Respondents in Rhode Island voted 51 per cent "for" and 44 per cent "against" national welfare standards, with 5 per cent undecided.

Federation researchers conclude that businessmen in states with high welfare payments support the plan in hopes it would stop the migration of "welfare gypsies" into their states from the low-paying states. This problem has intensified since the Supreme Court knocked out all state residency requirements for collecting welfare. No longer able to restrict benefits to established state residents, the liberal welfare states fear "invasions" of unemployed and indigent people from other states will substantially increase their already sizeable welfare costs to taxpayers.



Photo professionally posed.

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Indications: Infections susceptible to oral penicillin G: prophylaxis and treatment of streptococcal infections; treatment of pneumococcal, gonococcal, and susceptible staphylococcal infections; prophylaxis of rheumatic fever in patients with a previous history of the disease.

Contraindications: Infections caused by nonsusceptible organisms; history of penicillin sensitivity.

Warnings: Acute anaphylaxis (may prove fatal unless promptly controlled) is rare but more frequent in patients with previous penicillin sensitivity, bronchial asthma or other allergies. Resuscitative (epinephrine, aminophylline, pressor amines) and supportive (antihistamines, methylprednisolone sodium succinate) drugs should be readily available. Other rare hypersensitivity reactions include nephropathy, hemolytic anemia, leucopenia and thrombocytopenia.

In suspected hypersensitivity, evaluation of renal and hematopoietic systems is recommended.

Precautions: In suspected staphylococcal infections, perform proper laboratory studies including sensitivity tests. If overgrowth of nonsusceptible organisms occurs (constant observation is essential), discontinue penicillin and take appropriate measures. Whenever allergic reactions occur, withdraw penicillin unless condition being treated is considered life threatening and amenable only to penicillin. Penicillin may delay or prevent appearance of primary syphilitic lesions. Gonorrhea patients suspected of concurrent syphilis should be tested serologically for at least 3 months. When lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. Treat beta-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent rheumatic fever or glomerulonephritis. In staphylococcal infections, perform surgery as indicated.

Adverse Reactions: (Penicillin has significant index of sensitization): Skin rashes, ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; serum sickness-like reactions, including chills, fever, edema, arthralgia and prostration. Severe and often fatal anaphylaxis has been reported (see "Warnings").

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LEONHARD RAUWOLF, M.D.

(Concluded from Page 577)

eminently learned masters, able to instruct them in those arts and sciences, to the knowledge and comprehension of which they aspire; or where they may inform themselves of the constitutions and customs of famous nations and of other things subservient to their intentions."

It is a true testament to the scholar that through curious fate, because of Rauwolf's dedication to his own ideals of scholarship, his name today is better known than in his own times. In the use of raw, unadulterated snake root in the form of Rau-dixin we are reminded of a whole tradition of medicine, Medical Botany and Materia Medica which has practically disappeared. In the reading of this life of Rauwolf we are again reminded that some of our most potent therapeutic agents, namely digitalis, opium, quinine, ephedrine, caffeine, belladonna, except for refinements, purifications, and standardization, and hardly a generation away from the herbalist or the "Materia Medica" of Dioscorides.

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Book Reviews

DIAGNOSIS AND MANAGEMENT OF PAIN SYNDROMES by B. E. Finneson, M.D. 2nd edition, W. B. Saunders, Philadelphia 1969, pp. 337,

This effectively diagram-illustrated second edition gives comprehensive views on diagnostic and therapeutic methods of handling pain problems.

Interesting are the remarks on organic and psychosomatic pain and the value of the patient-physician relationship in their eventual alleviation. Also interesting are the discussion on adaptation to pain, racial variations, and absence of pain in the mentally disturbed.

A strange mental peculiarity is the one of the patient going for a check-up and deliberately not mentioning rectal pain because considered an improper subject to talk about.

Discussed at length are drugs; psychotherapy for migraine; psychogenic headache; and surgical procedures for pain in the neck, spine, and low back, visceral pain, the pain of peripheral vascular diseases, trench foot, phantom limb, nerve compression, painful scars (often psychosomatic), pain post herpes zoster, and terminal cancer pain.

F. RONCHESE, M.D.

PRACTICAL UROLOGY by Chester C. Winter. The C. V. Mosby Company, Saint Louis, 1969. \$11.00

Chester C. Winter has written a delightful, small book on Urology. As he states in his introduction, "This volume is meant to be a concise accumulation of practical information suitable to a spectrum of the medical profession; including medical students, general practitioners and surgeons; and it is especially designed to present current concepts on subject matter useful to the urologic specialist."

Chester Winter more than lives up to his intent. This book, though compact, includes most of the knowledge of a practical nature which we need in a review of Urology. He wastes no words. His presentations are marvels of conciseness and practicality. There are chapters which seem too much abbreviated, but this was not intended to be a complete textbook of Urology.

I would judge this book to be of particular value to interns and students from foreign countries studying for exams in Urology. At the end of each chapter are questions covering the subject, and these offer a good chance to test comprehension of the subject matter.

The chapter on Renal Hypertension is especially good, and this is what one would expect from Dr. Winter.

As an old-timer in Urology, I enjoyed this delightful volume. I recommend it heartily.

NATHAN CHASET, M.D.

LE PORFIRIE. Malattie del Metabolismo Porfirinico (Porphyria) by G. Carlon and E. Forti. *Giornale Veneto di Scienze Mediche*, Supplement to vol. 22, 1967. (In Italian).

LA SCINTIGRAFIA DEI TUMORI (The Scanning of Tumors) by Giuliano Bruscaignin. *Giornale Veneto di Scienze Mediche*, Supplement to vol. 23, 1968. (In Italian).

The first monograph is the work of two pathologists. Chemistry and metabolism of porphyrins are discussed. A personal classification is given considering more chemical than clinical deviations. The clinical dermatological part is also discussed. It is difficult to understand why, with 57 patients used in the study, furnished by the dermatologic division of the Hospital of Venice and reported clinically, a third author, a dermatologist, did not join the two laboratory workers. The furnishing of

(Concluded on page 590)

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PROVISIONAL VITAL STATISTICS— JANUARY-JUNE, 1969

RHODE ISLAND STATE DEPARTMENT OF HEALTH

JOSEPH E. CANNON, M.D., M.P.H., *Director*

The vital events that occurred in Rhode Island during the first half of 1969 are compared with the equivalent 1968 period in Table I. Rates are computed on an annual basis, and the per cent changes in rates are shown between 1968 and 1969.

Births: With 14 fewer live births to date in 1969 than in 1968, the Rhode Island rates were identical for both years (16.8 per 1,000 population). Nationally, the number of live births in the first six months of 1969 rose four per cent above 1968. It is too early to predict the future live birth trend.

Marriages: The number of marriages filed in this State during the first six months of 1969 continued the upward trend which started in 1967. There were 143 more marriages in 1969 than in this period in 1968, a four per cent increase. The 1969 marriage rate of 7.5 per 1,000 population surpassed 1968 (7.1) by six per cent, was 21 per cent above the 1967 rate of 6.2 and was 25 per cent greater than the 1966 rate (6.0).

Divorces: The high percentage increase in the number and rate of divorce in 1969 over 1968, as shown in Table I, can be misleading. The 1968 final decrees were grossly under-reported by the Family Court for Bristol and Providence Counties. The 534 divorces in the first half of 1969 and the rate of 1.2 per 1,000 population resemble the 1965 and 1966 figures.

Infant and Maternal Deaths: Infant deaths (under one year) and neonatal deaths (under 28 days) during January-June, 1969 were lower than 1968. Both the 1969 infant mortality rate of 19.9 per 1,000 live births and the neonatal rate of 14.9 were the lowest in the past ten years. The death rate for babies aged 28 days to one year rose from a ten-year low of 4.4 in 1968 to 5.0 in 1969. The

TABLE I.
Vital Events Occurring in Rhode Island,
January-June, 1968 and 1969

Item	Number		% Chge	Rate		% Chge
	1969	1968		1969	1968	
Live Births*	7631	7645	— 0.2	16.8	16.8	0
Marriages*	3390	3247	+ 4.4	7.5	7.1	+ 5.6
Divorces*	534	449	+18.9	1.2	1.0	+20.0
Deaths*	4749	4905	— 3.2	10.5	10.8	— 2.8
Infant Deaths**	152	152	— 2.6	19.9	20.4	— 2.5
Neonatal Deaths**	114	122	— 6.6	14.9	16.0	— 6.9
Fetal Deaths (20+)**	91	92	— 1.1	11.9	12.0	— 0.8

*Rate per 1,000 population.

**Rate per 1,000 live births; fetal deaths are those of 20 weeks or more gestation.

1960-64 average infant mortality rate of 23.3 dropped eight per cent to an average of 21.5 for 1965-69. The neonatal average decreased seven per cent and the post neonatal 12 per cent. Three maternal deaths occurred in the first half of 1969 contrasted with one in 1968.

Fetal Deaths: Only 91 fetal deaths of 20 or gestation were reported to date in 1969. The rate of 11.9 per 1,000 live births was the low point of the past decade. Table I shows very little difference between the first half of 1968 and 1969.

Deaths and Principal Causes of Death: Total deaths in 1969 and the rate were three per cent lower than 1968. To date in 1969 there were 156 fewer deaths than in 1968. Only diseases of the heart among the principal causes had more deaths in 1969 than 1968. The other nine leading causes, shown in Table II, decreased this year. Although there were 20 fewer accidental deaths in 1969, the number of motor-vehicle fatalities was identical in both periods. Table III also shows more homicides and suicides in 1969.

TABLE II.
Deaths from Ten Principal Causes with Death Rates Per 100,000 Population:
Rhode Island, January-June, 1968 and 1969

1969 Rank	Cause of Death (8th Rev., ICDA)	1969		1968	
		No.	Rate	No.	Rate
1.	Diseases of the heart (390-398, 402, 404, 410-429)	2129	469.7	2113	464.9
2.	Malignant neoplasms (140-209)	890	196.4	928	204.2
3.	Cerebrovascular disease (430-438)	416	91.8	439	96.6
4.	Accidents (800-949)	168	37.1	188	41.4
5.	Influenza and Pneumonia (470-474, 480-486)	156	34.4	173	38.1
6.	Diabetes mellitus (250)	130	28.7	143	31.5
7.	Certain causes of mortality in early infancy (760-769.2, 769.4-772, 774-778)	87	19.2	94	20.7
8.	Cirrhosis of liver (571)	81	17.9	90	19.8
9.	Bronchitis, emphysema, and asthma (490-493)	63	13.9	79	17.4
10.	Arteriosclerosis (440)	60	13.2	75	16.5

TABLE III.
Provisional Number of Deaths from Selected Causes:
Rhode Island, January-June, 1968 and 1969
(Excludes fetal deaths; rates per 100,000 estimated population except as noted)

Cause of Death (8th Rev., International Classification of Diseases, Adapt. 1965)	1969		1968	
	No.	Rate	No.	Rate
All Causes*	4749	10.5	4905	10.8
Enteritis and other diarrheal diseases (008, 009)	7	1.5	1	0.2
Tuberculosis, all forms (010-019)	10	2.2	13	2.9
Syphilis and its sequelae (090-097)	3	0.7	2	0.4
Other infective and parasitic diseases (Remainder of 000-136)	15	3.3	16	3.5
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (140-209)	890	196.4	928	204.2
Diabetes mellitus (250)	130	28.7	143	31.5
Meningitis (329)	3	0.7	7	1.5
Major cardiovascular diseases (390-448)	2678	590.9	2709	596.0
Diseases of heart (390-398, 402, 404, 410-429)	2129	469.7	2113	464.9
Active rheumatic fever and chronic rheumatic heart disease (390-398)	36	7.9	42	9.2
Hypertensive heart disease with or without renal disease (402, 404)	30	6.6	30	6.6
Ischemic heart disease (410-414)	2000	441.3	1958	430.8
Chronic disease of endocardium and other myocardial insufficiency (424, 428)	15	3.3	19	4.2
All other forms of heart disease (420-423, 425-427, 429)	48	10.6	64	14.1
Hypertension (400, 401, 403)	21	4.6	24	5.3
Cerebrovascular disease (430-438)	416	91.8	439	96.6
Arteriosclerosis (440)	60	13.2	75	16.5
Other diseases of arteries, arterioles, and capillaries (441-448)	52	11.5	58	12.8
Acute bronchitis and bronchiolitis (466)	1	0.2	1	0.2
Influenza (470-474)	156	34.4	173	38.1
Pneumonia (480-486)	7	1.5	19	4.2
Bronchitis, emphysema, and asthma (490-493)	149	32.9	154	33.9
Chronic and unqualified bronchitis (490, 491)	63	13.9	79	17.4
Emphysema (492)	11	2.4	18	4.0
Asthma (493)	46	10.1	54	11.9
Peptic Ulcer (531-533)	6	1.3	7	1.5
Hernia and intestinal obstruction (550-553, 560)	31	6.8	29	6.4
Cirrhosis of liver (571)	15	3.3	7	1.5
Cholelithiasis, Cholecystitis, and cholangitis (574, 575)	81	17.9	90	19.8
Nephritis and nephrosis (580-584)	18	4.0	10	2.2
Infections of kidney (590)	23	5.1	40	8.8
Hyperplasia of prostate (600)	16	3.5	25	5.5
Congenital anomalies (740-759)	1	0.2	2	0.4
Certain causes of mortality in early infancy (760-769.2, 769.4-772, 774-778)	45	9.9	36	7.9
Symptoms and ill-defined conditions (780-796)	87	19.2	94	20.7
All other disease (Residual)	4	0.9	11	2.4
Accidents (800-949)	251	55.4	255	56.1
Motor-vehicle accidents (810-823)	168	37.1	188	41.4
All other accidents (800-807, 825-949)	67	14.8	67	14.7
Occurring in home (NESCA-00)	101	22.3	121	26.6
Suicide (950-959)	44	9.7	76	16.7
Homicide (960-978)	31	6.8	29	6.4
All other external causes (980-999)	15	3.3	11	2.4
	7	1.5	6	1.3

*Rate per 1,000 Population.

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DERMAQUIZ ANSWER

(See Page 547)

At left, pityriasis alba.
At right, psoriasis, the type most resistant to therapy.

ROENTGEN RIDDLE ANSWER

(See Page 551)

ANSWER: BATTERED CHILD SYNDROME

This entity should be specifically suggested when metaphyseal avulsion or fragmentation and periosteal new bone formation is seen. This combination in the same or multiple sites, cannot be explained by a single episode of trauma.

The roentgen picture of repeated deliberate trauma is explained by the response of the skeleton of the infant or toddler to skeletal injury. The periosteum is attached very loosely to the shaft of the mineralized bone, but is firmly attached at the metaphysis. Therefore, such injuries may in addition to elevating the periosteum and causing eventual periosteal new bone formation, avulse a portion of the metaphysis.

The parents very often will not voluntarily give information which will be helpful in making the diagnosis. However, if the physician is aware of the roentgen features of this condition, he can often make a specific diagnosis. This will lead to an investigation of the home situation and removal of the child from danger.

SEPTEMBER JOURNALS WANTED

The Library seeks copies of the September, 1969, issue of the **Rhode Island Medical Journal**. Members not retaining their copy on file are urged to leave it at the Library.

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BOOK REVIEWS

(Continued from page 587)

57 clinical cases was rewarded with 3 microscopic lines of thanks.

The second monograph deals with the use of radioisotopes in the scanning of tumors. It should be of particular interest to the radiologist.

These two valuable publications come to us as supplements of *Giornale Veneto di Scienze Mediche*, bearing on its cover the ornate portal-entrance of the Ospedali Civili of Venice (facing the Colleoni famous equestrian monument). The *Giornale Veneto* is one of thirteen medical journals received in exchange with the Rhode Island Medical Journal and on display in our Medical Library.

F. RONCHESE, M.D.

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When a member is hospitalized, benefits will include medical care, consultation and mental care.

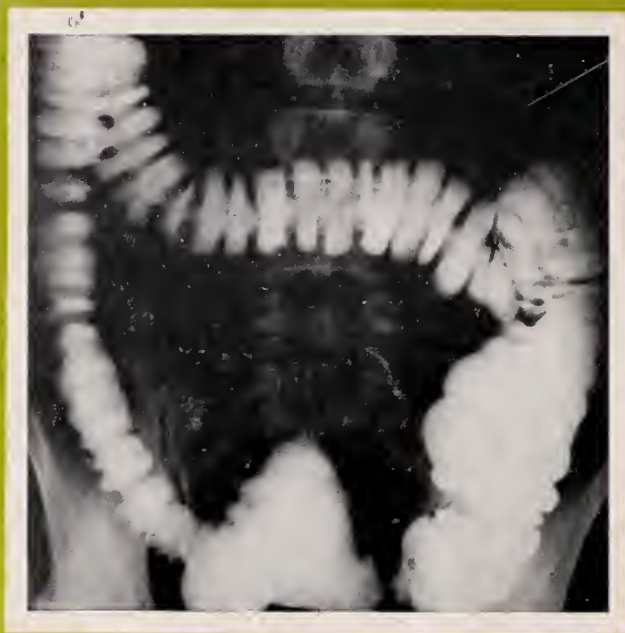
Maternity benefits under Blue Shield "100" will be paid in full after the subscriber pays the first \$50, and will include pre- and post-natal care. Care of newborn infants is covered in full and not subject to the deductible.

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation

or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

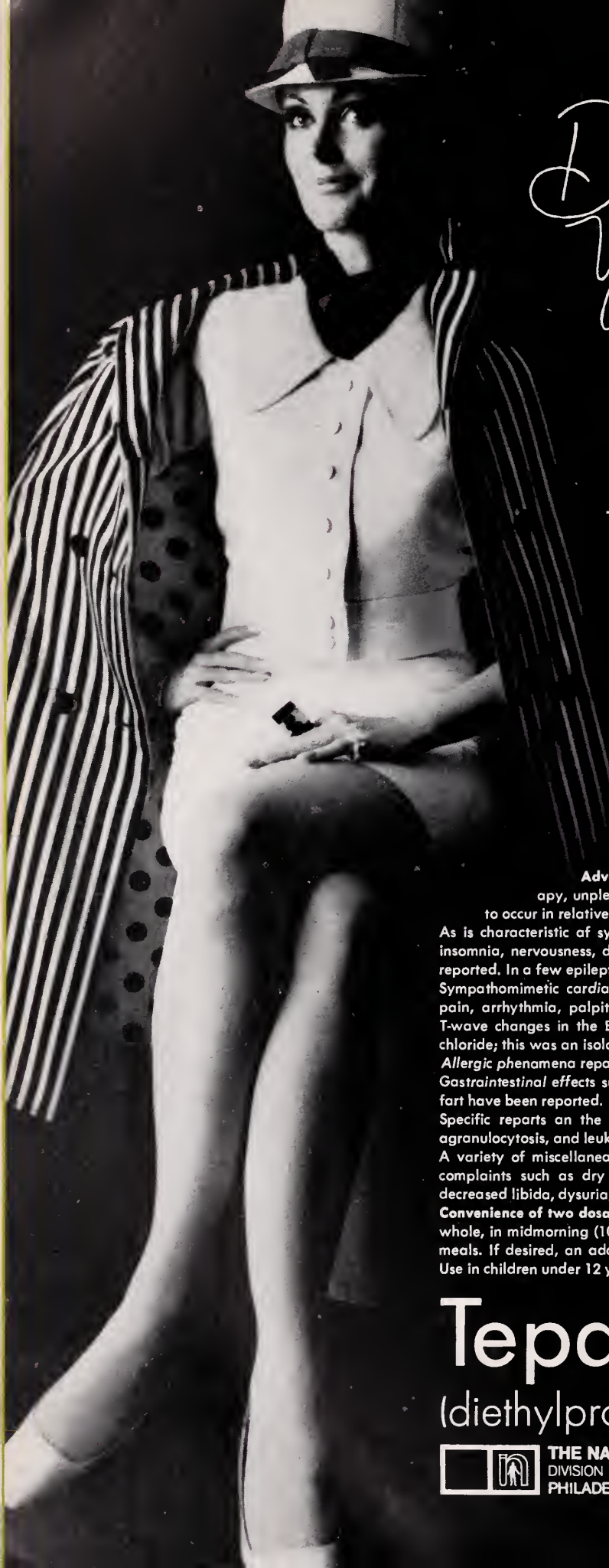


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Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence.

As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported.

Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report describes T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others.

Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. **Gastrointestinal effects** such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported.

Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia.

A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in mid-evening to overcome night hunger. Use in children under 12 years of age is not recommended.

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Lactinex has been shown to be useful in the treatment of gastrointestinal disturbances, and for relieving the painful oral lesions of fever blisters and canker sores of herpetic origin.^{1,2,3,4,5,6,7,8}

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

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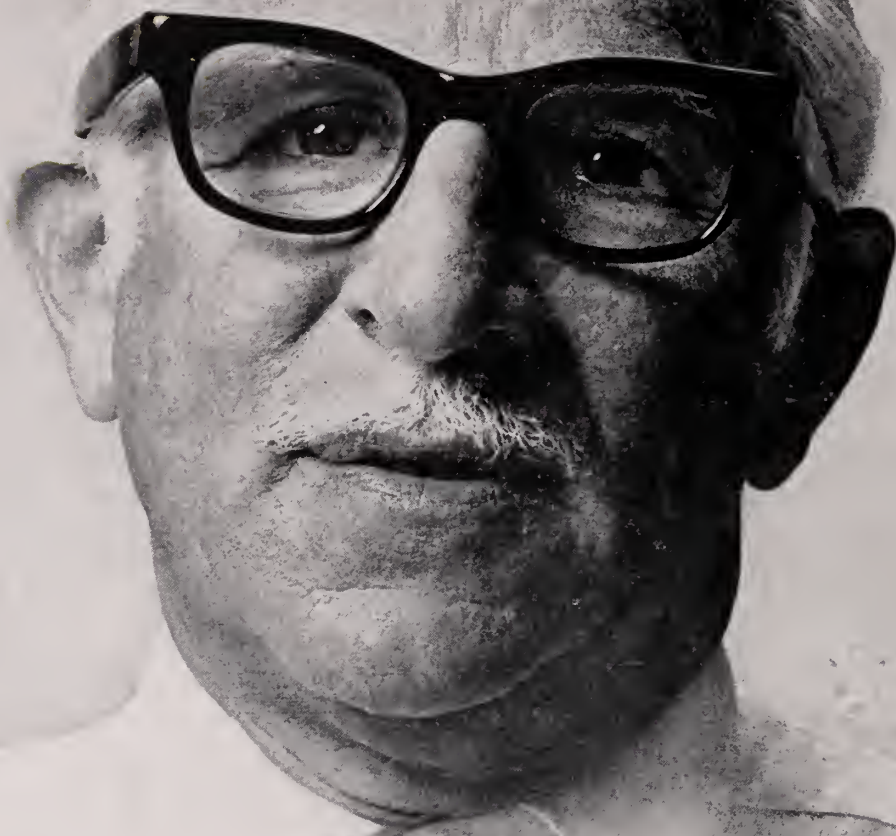
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For your susceptible candidates, prescribe DECLOSTATIN—the broad-spectrum therapy that prevents monilial overgrowth.

Effectiveness: Because its antibacterial component is DECELOMYCIN Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, Nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—*anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani.* Skin—*maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare).* Kidney—*rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare).* Hypersensitivity reactions—*urticaria, angioneurotic edema, anaphylaxis.* Teeth—*dental staining (yellow-brown) in children of mothers given the drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy.* Demethylchlortetracycline may form a stable calcium complex in *bone-forming tissue with no serious harmful effects reported thus far in humans.*

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, food, and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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The RHODE ISLAND MEDICAL JOURNAL

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The 2nd Samuel Adelson Memorial Lecture

THE SURGEON'S ROLE IN THE EVOLUTION AND MANAGEMENT OF DISEASES BROUGHT TO LIGHT BY THE CONQUEST OF OLD ONES

. . . *Continuing Education Essential For Awareness of Medical Advances and Newly Emergent Syndromes* . . .

F. A. SIMEONE, M.D. . . . 611

PERCUTANEOUS RADIO FREQUENCY CERVICAL CORDOTOMY

. . . *Reliability and Safety of Low Anterior Approach Indicates Usefulness to Debilitated Patients* . . .

ROBERT H. STURMAN, M.D. . . . 616

Masters In Medicine

DOCTOR THOMAS HODGKIN AND SIR MOSES MONTEFIORE

"In Their Lives, Even In Their Deaths, They Were Not Divided"

HARRY A. SAVITZ, M.D. . . . 619

RUBELLA VACCINE RECOMMENDATIONS

. . . *A Report With Recommendations From The Council on Environmental and Public Health of the American Medical Association* . . . 622

OSTEOPATHS AND DOCTORS OF MEDICINE

. . . *Report of Special Ad Hoc Committee of the Society as Amended and Approved by the House of Delegates on October 1, 1969* . . . 623

EDITORIALS

Length of Stay in Teaching Hospitals . . . 627

Magnetic Crystals . . . 627

Guest Editorial:

Communication — Key To Health . . . 628

Inter-Industry Aerosol Committee . . . 628

Interferon . . . 629

DEPARTMENTS

Book Reviews . . . 641

Dermaquiz . . . 601

District Medical Society Meetings . . . 608

House of Delegates, R. I. Medical Society, Report of October 1, 1969 Meeting . . . 631

Peripatetics . . . 648

Through the Microscope . . . 600

The Washington Scene . . . 594

THE WASHINGTON SCENE

*A Summary Report Prepared by
the Washington Office of the Amer-
ican Medical Association.*



Health, Education and Welfare Secretary Robert Finch has asked a special Task Force on medicaid to examine and make recommendations on proposals for a sweeping national health program.

The Task Force, headed by Walter J. McNerney, president of the Blue Cross Association, is scheduled to issue a report about the first of the year.

After referring to a proposal for universal health insurance endorsed by many governors at the National Governors' Conference, Finch told McNerney in a letter:

"I would like specifically to request that the Task Force consider, along with its other deliberations on medicaid and related programs, what directions and initiatives you feel the HEW Department should pursue in this area."

According to McNerney, one phase of the study would include the extension of medicare to persons of all ages, roughly the national compulsory health plan backed by Walter Reuther of the United Auto Workers and his Committee of 100 for National Health Insurance.

McNerney, however, also said that all types of mass plans would be studied, including the health insurance tax credit proposal endorsed by the American Medical Association.

The rapidly rising costs of medicare and medicaid have brought the issue to the forefront. The Administration said older people who enter the hospital after January 1 will have to pay for an additional \$8 of their hospital bills due to the higher costs. The increase is required by law.

The benefit cutback results from an adjustment of the portion of the hospital bill for which a medicare beneficiary is responsible if these costs have risen substantially.

* * *

After a two-year study, Sen. Abraham Ribicoff (D., Conn.), former HEW secretary, said he's reached the conclusion the federal health effort "is a planless conglomeration of programs administered by more than a score of agencies and departments."

Federal health spending "instead of supporting programs to provide for the health of the people . . . is maintaining a cumbersome, disjointed bureaucracy that even key government officials have difficulty managing," he told the Senate.

"Instead of eliminating problems, (they) may be adding to factors such as rising costs, limited access to care and the fragmented organization of health services."

"There are so many programs administered in such bureaucratic confusion that no one — not the HEW Department, not the Bureau of the Budget nor any private organization was able to tell the subcommittee even how many programs there are."

* * *

The American Medical Association told Congress drug dependent persons should be treated as patients rather than criminals.

In testimony before the Senate Juvenile Delinquency Subcommittee, Henry Brill, M.D., chairman of the AMA's Committee on Alcoholism and Drug Dependence, said physicians are concerned over legislation before the Subcommittee proposing harsher penalties for persons unlawfully possessing drugs for their personal use.

"Mere possession for personal use of depressant and stimulant drugs having a legitimate medical usage should not constitute an offense," Dr. Brill said. "The degree of social hazard and the reasons for having the drug should be taken into account."

"With respect to the entire section on offenses and penalties, we propose an amendment to direct courts to appoint a panel of medical experts in each case where a drug abuser is brought to trial on a charge of illegal possession and where, in the court's opinion, medical treatment may be indicated. The panel would make a determination as to whether the defendant has a medical problem associated with his abuse of drugs — a physical or psychological disability or drug dependence.

"If medical treatment is indicated, the panel

(Continued on Page 599)

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.



The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.



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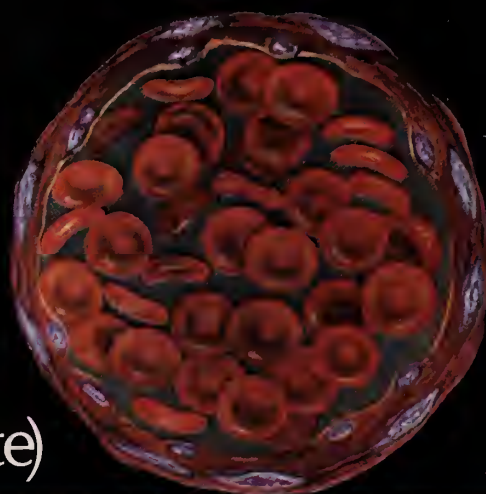
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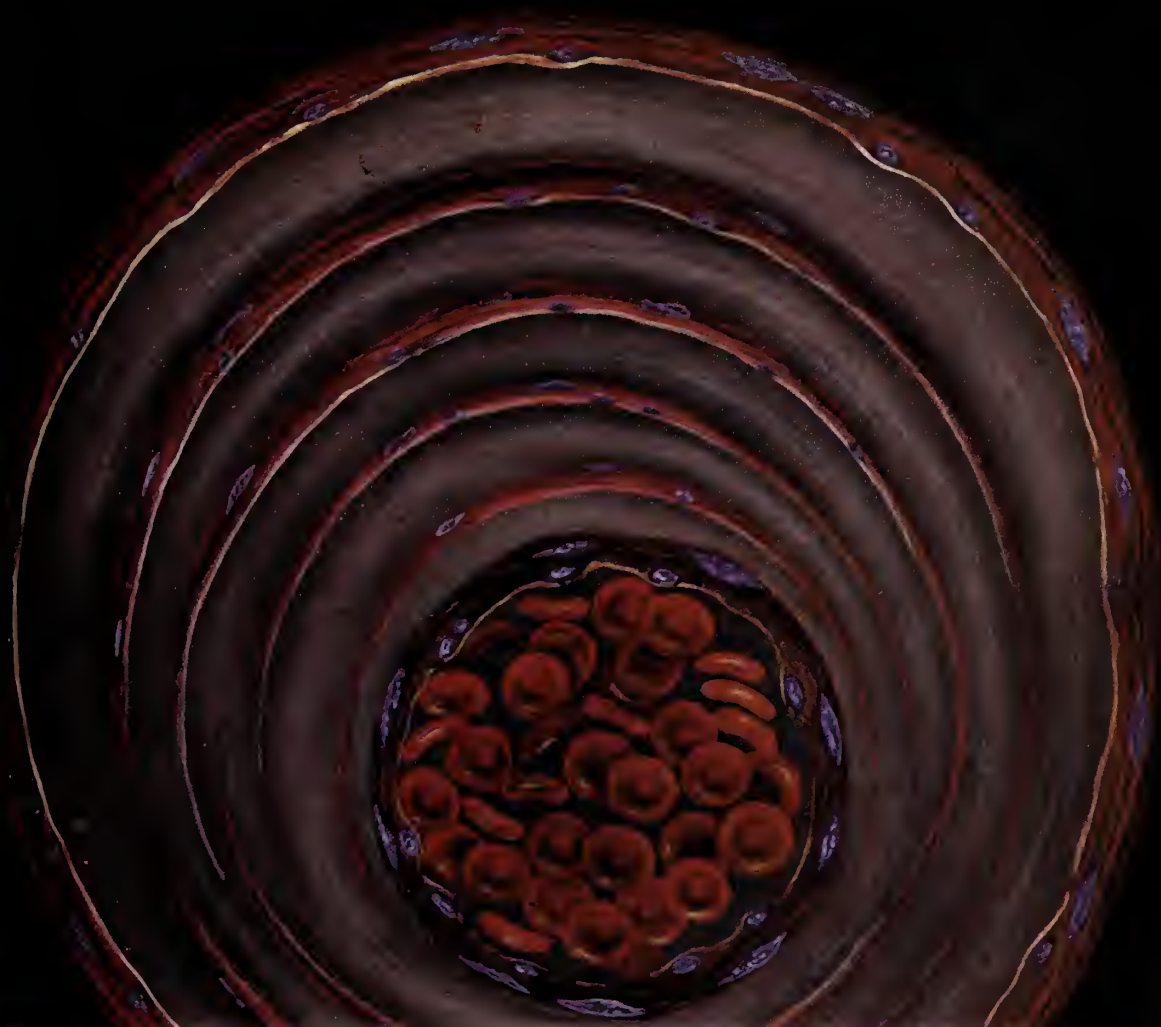
Roniacol Timespan (nicotinyl alcohol tartrate) can make a significant contribution to effective treatment of peripheral vascular disorders. It is directed specifically toward improvement of peripheral blood flow, relief of ischemic symptoms, and the long-term management of these conditions.

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Caution: Roche Laboratories endorses caution in the administration of any therapeutic agent to pregnant patients.

Side Effects: Transient flushing, gastric disturbances, minor skin rashes and allergies may occur in some patients, seldom requiring discontinuation of the drug.

Dosage: 1 or 2 Timespan Tablets—150 mg nicotinyl alcohol in the form of the tartrate salt—bottles of 50 and 500.



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Warning: Do not use during the first trimester of
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or behavior changes, hallucinations or
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somnia, urinary frequency or nocturia,
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WITH COEXISTING
DEPRESSION

TRIAVIL[®]

TRANQUILIZER-
ANTIDEPRESSANT

Containing perphenazine and amitriptyline HCl

For prescribing information, including indica-
tions, contraindications, warnings, precautions,
and side effects, please see following page.

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TRIAVIL®

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Containing perphenazine and amitriptyline HCl

TRIAVIL®2-25: Each tablet contains 2 mg. of perphenazine and 25 mg. of amitriptyline hydrochloride.

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TRIAVIL®4-10: Each tablet contains 4 mg. of perphenazine and 10 mg. of amitriptyline hydrochloride.

INDICATIONS: Patients with moderate to severe anxiety and/or agitation and depressed mood; patients with depression in whom anxiety and/or agitation are severe; patients with depression and anxiety in association with chronic physical disease; schizophrenics with associated depressive symptoms.

CONTRAINDICATIONS: Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); bone marrow depression; urinary retention; pregnancy; glaucoma. Do not give in combination with MAOI drugs because of possible potentiation that may even cause death. Allow at least 2 weeks between therapies. In such patients therapy with TRIAVIL should be initiated cautiously, with gradual increase in the dosage required to obtain a satisfactory response.

WARNINGS: Patients should be warned against driving a car or operating machinery or apparatus requiring alert attention, and that response to alcohol may be potentiated.

PRECAUTIONS: Suicide is always a possibility in mental depression and may remain until significant remission occurs. Supervise patients closely in case they may require hospitalization or concomitant electroshock therapy. Untoward reactions have been reported after the combined use of antidepressant agents having various modes of activity. Accordingly, consider possibility of potentiation in combined use of antidepressants. Not recommended for use in children. Mania or hypomania may be precipitated in manic-depressives (perphenazine in TRIAVIL seems to reduce likelihood of this effect). If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Caution patients about errors of judgment due to change in mood.

SIDE EFFECTS: Similar to those reported with either constituent alone.

Perphenazine: Should not be used indiscriminately. Use caution in patients with history of convulsive disorders or

severe reactions to other phenothiazines. Likelihood of untoward actions greater with high doses. Closely supervise with any dosage. Side effects may be any of those reported with phenothiazine drugs: blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); liver damage (jaundice, biliary stasis); extrapyramidal symptoms (opisthotonos, oculogyric crisis, hyperreflexia, dystonia, akathisia, dyskinesia, parkinsonism) usually controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine; severe acute hypotension (of particular concern in patients with mitral insufficiency or pheochromocytoma); skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; endocrine disturbances (lactation, galactorrhea, disturbances of menstrual cycle); grand mal convulsions; cerebral edema; altered cerebrospinal fluid proteins; polyphagia; paradoxical excitement; photophobia; skin pigmentation; failure of ejaculation; EKG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions such as dryness of the mouth, headache, nausea, vomiting, constipation, obstipation, urinary frequency, blurred vision, nasal congestion, and a change in the pulse rate; hypnotic effects; pigmentary retinopathy; corneal and lenticular pigmentation; occasional lassitude; muscle weakness; mild insomnia; significant unexplained rise in body temperature may suggest intolerance to perphenazine, in which case discontinue. Antiemetic effect may obscure signs of toxicity due to overdosage of other drugs or make diagnosis of other disorders such as brain tumors or intestinal obstruction difficult. May potentiate central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol), atropine, heat, and phosphorous insecticides.

Amitriptyline: Careful observation of all patients recommended. Side effects include drowsiness (may occur within the first few days of therapy); dizziness; nausea; excitement; hypotension; fainting; fine tremor; jitteriness; weakness; headache; heartburn; anorexia; increased perspiration; incoordination; allergic-type reactions manifested by skin rash, swelling of face and tongue, itching; numbness and tingling of limbs, including peripheral neuropathy; activation of latent schizophrenia (however, the perphenazine content may prevent this reaction in some cases); epileptiform seizures in chronic schizophrenics; temporary confusion, disturbed concentration, or transient visual hallucinations on high doses; evidence of anticholinergic activity, such as tachycardia, dryness of mouth, blurring of vision, urinary retention, constipation, paralytic ileus; agranulocytosis; jaundice. The antidepressant activity may be evident within 3 or 4 days or may take as long as 30 days to develop adequately, and lack of response sometimes occurs. Response to medication will vary according to severity as well as type of depression present. Elderly patients and adolescents can often be managed on lower dosage levels.

For more detailed information consult your Merck Sharp and Dohme representative or see the package circular.



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THE WASHINGTON SCENE

(Continued from Page 594)

would recommend to the court the type of treatment needed — that is, general — medical or psychiatric care; in-patient hospitalization or clinical treatment; group therapy; half-way house etc. If medical treatment is not indicated, or if measures in addition to medical treatment are needed, the court would then consider the non-medical handling of the case."

Under the proposed AMA changes, the HEW Department rather than the Justice Department, would control the official classification of drugs, and the research and public education programs in the field. Control provisions would focus on manufacturers and distributors, rather than on physicians.

"We recommend that as a matter of public policy Congress explicitly charge the HEW Department with the major responsibility for research on all aspects of drug abuse and dependence other than enforcement," said Dr. Brill.

The AMA supports provisions in the legislation "which would allow researchers to withhold names of subjects, and to handle controlled drugs without prosecution, especially on state and local levels, which has served to hamper needed research in the past."

* * *

The American Medical Association supported legislation to require foreign medical graduates trained in this country to spend two years of residence in their native land or land of previous residence before becoming eligible to apply for U.S. citizenship.

C. H. William Ruhe, M.D., director of the AMA's Division of Medical Education, said the measure would strengthen the Exchange Visitor Program. However, Dr. Ruhe suggested the provision be strengthened to require that citizens of less-developed nations return to their home countries rather than their latest nation of residence. He cited the example of citizens of India who come to the United States from India.

"If such participants are required merely to return to England there will be no alleviation of the brain drain from India," he told the House Judiciary Subcommittee on Immigration.

* * *

The HEW Department's Children's Bureau was broken into separate health and welfare units.

Under the reorganization:

- Health programs administered by the Children's Bureau were transferred to the Health Services and Mental Health Administration (HSMHA) where they will form a new organizational unit. Programs included are for maternal and child health services, crippled children, maternity and

infant care, and health of school and preschool children.

- The Children's Bureau as such goes from the Social and Rehabilitation Service to the Office of the HEW Secretary, where it becomes part of the new Office of Child Development. The Bureau will maintain its role of leadership and coordination of child and parent programs throughout the Department. It will also continue to investigate and report on all matters pertaining to the welfare of children.

- Community services administration is established in the Social and Rehabilitation Service to consolidate the administration of social service programs for children and adults. These include programs located previously in the Children's Bureau and in other agencies of the Social and Rehabilitation Service.

"I expect the Office of Child Development and the Children's Bureau to be vigorous advocates of the interests of children," HEW Secretary Robert Finch said. "They will work directly with public and private agencies to stimulate improvements in the availability and quality of services to children and parents, and to work with all agencies of HEW."

Secretary Finch said that maternal and child health programs will be strengthened by their placement in HSMHA. "All of the health programs administered by HSMHA should benefit from this new and closer relationship," the secretary said.

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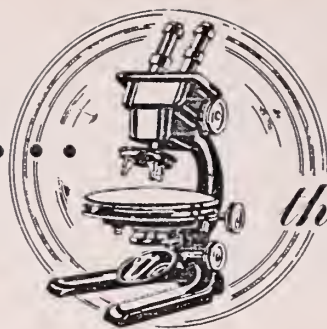
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THROUGH .



the Microscope

THE AMERICAN FAMILY—TODAY AND TOMORROW

The number of families in the United States has grown steadily since the end of World War II and is likely to continue to do so in the years to come. The average number of persons per family has not increased, however, and it is not anticipated that it will rise in the near future. In fact, the family size declined from 3.67 in 1947 to 3.54 in 1950, gradually rose to 3.67 by 1960, and climbed to a post World War II peak of 3.72 in March 1966. The average size family decreased to 3.66 by March 1968 and the indications are that it may continued to fall through 1980.

The record numbers of babies born after World War II have significantly affected the size of the average family. The average number of persons under 18 years of age per family increased sharply between 1950 and 1960 and the uptrend continued at a slower pace till 1966. This more than offset the immediate postwar decline in the average number of persons ages 18 and over in families.

Although the birth rate in the United States has been on the decline since 1958, the annual number of births did not decrease until 1962. In 1966 there was a reversal in the trend of the average number of persons under 18 years of age per family. Moreover, even though the number of births is expected to increase soon when the postwar "boom" babies marry and begin to form their own families, the effect of the declining birth rate over the past 11 years will produce a decline in the average number of persons under 18 years of age per family in the next decade or so. Because of this and the prospect that the average number of persons ages 18 and over in families will remain at much the same level as in 1956, the average size of the American family is likely to decline to 3.50 by 1980. It is of interest to note that an analysis¹ of the National Fertility Study, recently conducted by the Center for Population Research, reveals that the number of children American women are most likely to have is three.

¹Ryder, Norman B., and Westoff, Charles F.: Relationships Among Intended, Expected, Desired, and Ideal Family Size: United States 1965. Population Research, March 1969.

According to the latest data from the Bureau of the Census, 181.1 million people or 92 per cent of the country's resident population were members of families in March 1967; a family is defined as a group of two or more persons living together and related by blood, marriage, or adoption. Some 85.1 million of these people were either the heads of husband-wife families or wives of the family head, and 6.4 million headed other types of families. There were 55.9 million children under 14 years of age in all of these families; the remaining members were either older children or other adult relatives.

Generally family heads are relatively young. In more than a quarter of all families the head is under 35 years of age, and in about another quarter the head is in the age group 35-44. On the other hand, in about a seventh of the families the head is at least 65 years old.

In March 1967 the average family size for the 48.9 million families then in the United States was 3.70 persons. Seven out of eight of these families consisted of husbands and wives living together in a household. Husband-wife families accounted for almost nine out of every ten families in which the head was under 45 years of age; the proportion decreases with advance in age of the family head, but husband-wife families constituted, nevertheless, almost four out of every five families where the head was 65 years of age and over. The proportion of families headed by females increases with age, reflecting the higher mortality rates among males. Although overall only 1 out of every 10 families had a woman as its head, at ages past 65 females accounted for 1 out of 6 family heads.

About three fifths of the husband-wife families have their own children under 18 residing with them. The proportion varies from a high of almost nine tenths for a husband aged 30-44 to one fifth at ages 55-64, and then falls off rapidly. Over one fifth of husband-wife families have three or more children in their care. Nearly one half of the husbands aged 30-44 have the responsibility for raising this many children. The average number of own children under age 18 in all husband-wife families is 1.39. Family responsibility is greatest

(Continued on Page 604)



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UP TO 12 HOURS CLEAR BREATHING ON ONE TABLET

Indications: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, sinusitis, rhinitis, conjunctivitis, and otitis.

Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy.

Precautions: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.

Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.

Dosage: 1 Extentab morning and evening.

Supplied: Bottles of 100 and 500.

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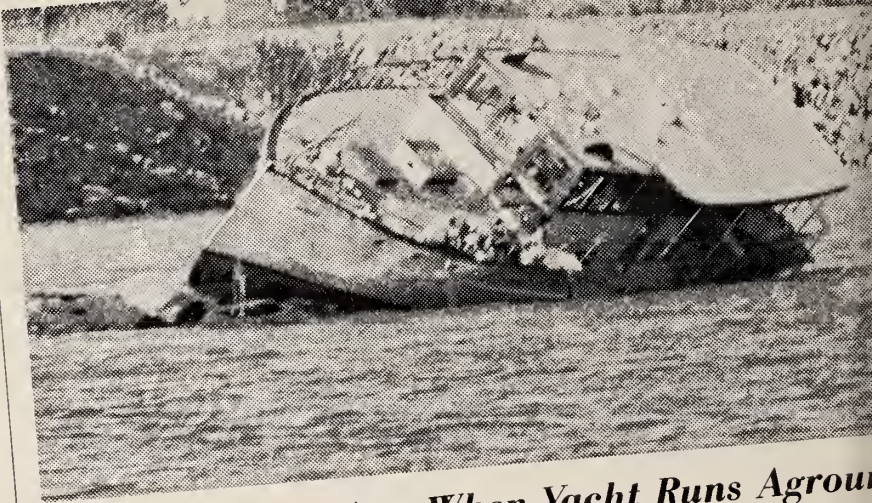
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Owner Breaks Arm When Yacht Runs Aground

Schuyler, Oct. 31. Harry Waters of Covesville incurred a fractured arm when his yacht struck a large rock.

tially capsized. The fire department had to rescue Waters by small boat. Damage to the yacht is estimated at \$10,000.

For the patient who has been through an accident, the worry and anxiety following the mishap may actually heighten the perception of pain. This is why there's a classic 1/4 grain sedative dose of phenobarbital in Phenaphen with Codeine—to take the nervous “edge” off, so the rest of the formula can control the pain more effectively.

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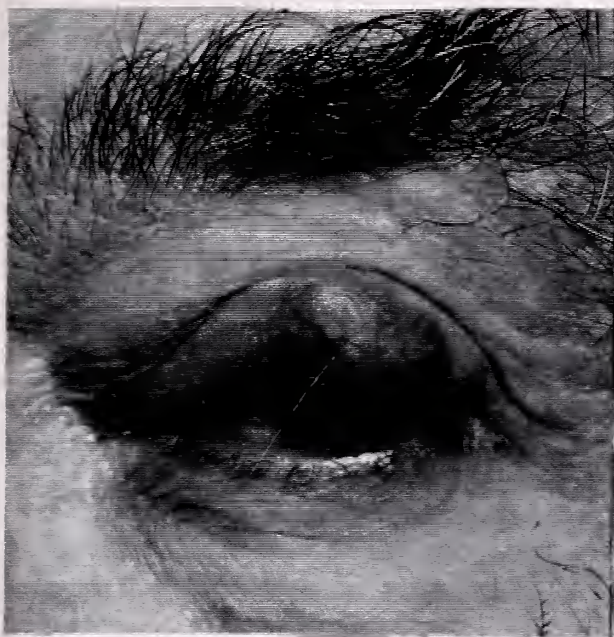
The compound analgesic that calms instead of caffeinates.

Indications: Phenaphen with Codeine provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. Contraindications: Hypersensitivity to any of the components. Precautions: As with a phenacetin-containing product, excessive or prolonged use should be avoided. Side effects: Side effects are uncommon, although nausea, constipation and drowsiness may occur. Dosage: Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.



DERMA QUIZ

Conducted by FRANCESCO RONCHESE, M.D.



Left, a solid, yellowish, brownish tumor with telangiectases, of 3 years duration, enlarging slowly, indolent, in a 70 year old man.



Right, a tumor purplish red, soft, warmer to the touch than the surrounding skin, with strawberry-like pits, indolent, present at birth, in a 9 month old child.

Answer on Page 648



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

For elderly patients
in need of a mild tranquilizer
consider **Tybatran**[®]
brand of tybamate

(When you consult
the Prescribing Information
you may agree
it makes good sense)



PREScribing INFORMATION

Indications: Tybatran (tybamate) has afforded symptomatic improvement in a variety of psychoneurotic disorders, especially in the treatment of the anxiety and tension components of psychoneuroses. Anxiety states manifested somatically have responded to Tybatran (tybamate).

Tybatran (tybamate) has been useful in the control of agitation in the aged and in the alleviation of some of the adverse emotional accompaniments of senility.

Tybatran (tybamate) has been used with benefit in the treatment of depressive symptoms associated with anxiety and other symptoms of psychoneuroses. However, it is not indicated for primary treatment of depressive states. It is not an antipsychotic agent, although it has been used as adjunctive therapy in some psychotic patients.

Dosage: One 350 mg. capsule, 3 times daily and two at bedtime is suggested as the adult starting dose. Adjust to suit individual requirements. Daily doses above 3000 mg. are not recommended.

Contraindications: Known hypersensitivity to tybamate. Since no studies have been done with this drug in human pregnancy, it should not be used in pregnancy unless the potential benefit outweighs the risk.

Warnings: Administer cautiously to patients receiving phenothiazines or other CNS depressants or having history of convulsive seizures (See Adverse Reactions). Consider possibility of additive actions with alcohol or other psychotropic agents, particularly phenothiazines or MAO inhibitors.

Precautions: Avoid abrupt withdrawal after prolonged use, although withdrawal symptoms have not been reported to date. Exercise caution in addiction-prone individuals. If symptoms of hypersensitivity occur, discontinue at once and initiate appropriate symptomatic treatment. Avoid activities requiring optimal mental alertness if drowsiness or vertigo are present. As with any new drug, use cautiously in patients with history of drug allergies, blood dyscrasias, and hepatic or renal disease; periodic measurements of hepatic, hematopoietic and renal function should accompany prolonged and/or high doses.

Adverse Reactions: Most frequent reactions, rarely requiring discontinuation of tybamate, include drowsiness, lizziness, nausea, insomnia, and euphoria. There have been a few reports of skin rash, urticaria, and pruritus. Rare side effects include hyperactivity, fidgetiness, flushing, and tachycardia, suggesting excessive stimulation; also ataxia, unsteadiness, confusion, feeling of unreality, "panic reaction," fatigue, headache, paresthesias, vertigo, gastrointestinal disturbances, glossitis, and dry mouth. Grand mal or petit mal seizures have been reported in a few hospitalized psychotic patients receiving tybamate (up to 6000 mg. daily) together with phenothiazines and other psychotropic agents, but not with tybamate alone. Consider the possibility of rare, serious adverse reactions such as may occur with the related drug, meprobamate. If excessive amounts are ingested, gastric lavage and symptomatic therapy, including central stimulants as necessary, are recommended. Before prescribing, consult package circular.

Supply: Tybatran (tybamate) is available in green, sealed capsules of three strengths: 350 mg., 250 mg., and 125 mg. Each strength is supplied in bottles of 100 and 500.

COMPLETE, ACCURATE AND PROMPT
ANALYSIS

HOPKINS MEDICAL LABORATORY

322 Broadway
Providence, Rhode Island

Tel. GAspee 1-7244

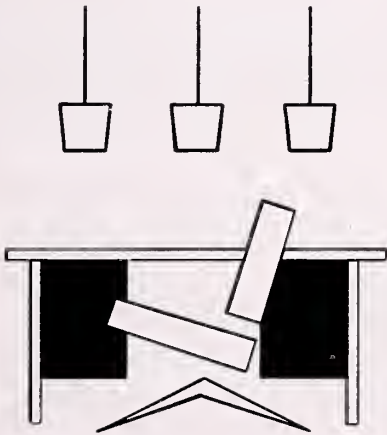
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Angelo G. Viticone, AB;MT.
Director

Ascanio Di Pippo, Ph.D.
Biochemistry

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THROUGH THE MICROSCOPE

(Continued from Page 600)

for husbands aged 30-34 and 35-44, both groups having an average of 2.5 dependent children. Even though the average rapidly decreases at ages 45 and over as children reach their 18th birthday, marry, or leave home for other reasons, there are 340,000 children in the care of fathers 65 years of age and over.

Female heads of families have 6.2 million of their own children under 18 living with them. The number of children in such families increases from 1.56 when the mother is under 25 years of age to 2.69 when she is 30-34 years. At ages under 35 years female heads have relatively more children in their care than do husband-wife families.

SEE 46 MILLION INJURED IN 1969

Approximately one person in four — or about 46 million Americans — will be injured this year, the Health Insurance Institute said recently.

Of those injured, more than 18 million will be hospitalized; an estimated 112,000 will die.

These projections are based on U.S. government studies which indicate that 50,000 hospital beds are utilized daily by accident victims.

The Institute also noted that an American College of Surgeons report shows there would be fewer

fatalities due to injuries if those injured received better emergency treatment.

Dr. Robert H. Kennedy, ACS field director, estimates that one-fifth of those who die of injuries each year — over 22,000 — might be saved if treated properly before reaching the hospital.

Proper ambulance service, he says, is the key to saving many lives annually.

Formerly, interns or residents accompanied the ambulances. But today, due to shortages of trained medical men, they are no longer available.

In many cases today the only people on emergency ambulances are untrained attendants, often even lacking in first aid skills.

And though courses for these attendants now have been introduced throughout the country, they follow no standardized pattern of curriculum or specified length of training.

COST OF HAVING BABY GOES UP

The cost of having a baby in the United States — just one — could come to about \$1,500 through its first week at home, the Health Insurance Institute reported recently.

That amount includes all the basics from obstetrical fees to diaper pins.

Assuming total costs at the mid point of the cost range here's how the figures break down: \$571 for hospital care, \$245 for medical care, \$517 for baby clothes and supplies and \$164 for maternity clothes.

There are, suggests the Institute, besides doing with less, two key ways to keep expenses down.

The first is through the use of health insurance.

Although maternity is not regarded as an insurable expense in the purest sense, typical health insurance or prepayment plans will pay approximately \$200 to \$350 toward hospital and doctor charges.

The second is using hand-me-downs and the usual family gifts to take the edge off some of the early expenses.

But these items aside, here's a check-list based on today's average costs:

Hospital costs: \$571, including \$372 for daily room charges; \$75, delivery room charge; \$114, nursery charges.

Medical costs: \$280, including \$225 in obstetrician bills and \$20 for the cost of pediatric care.

HEARING LOSS STATISTICS ANALYZED

Some people with hearing problems blame them on a blow to the head.

Others attribute them to the after-effects of a disease.

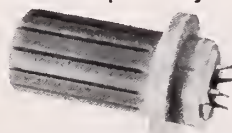
Still others, as the result of an infection.

But nearly 2 out of every 5 Americans with serious hearing problems don't know what caused them.

(Continued on Page 605)

TB is still around.

In 1967 almost 45,000 new active cases were reported. Isn't that a good reason to make tuberculin testing with the white LEDERTINE™ Applicator a routine part of your physical examinations?



**TUBERCULIN
TINE TEST**

(Rosenthal) with Old Tuberculin

Precautions: With a positive reaction, consider further diagnostic procedures. Use with caution in persons with active tuberculosis or known allergy to acacia. Vesiculation, ulceration, or necrosis may occur at the test site in highly sensitive persons.

LEDERLE LEDERLE LABORATORIES

A Division of American Cyanamid Company, Pearl River, N.Y.

472-9



Painful night leg cramps...

unwelcome bedfellow for any patient—
including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

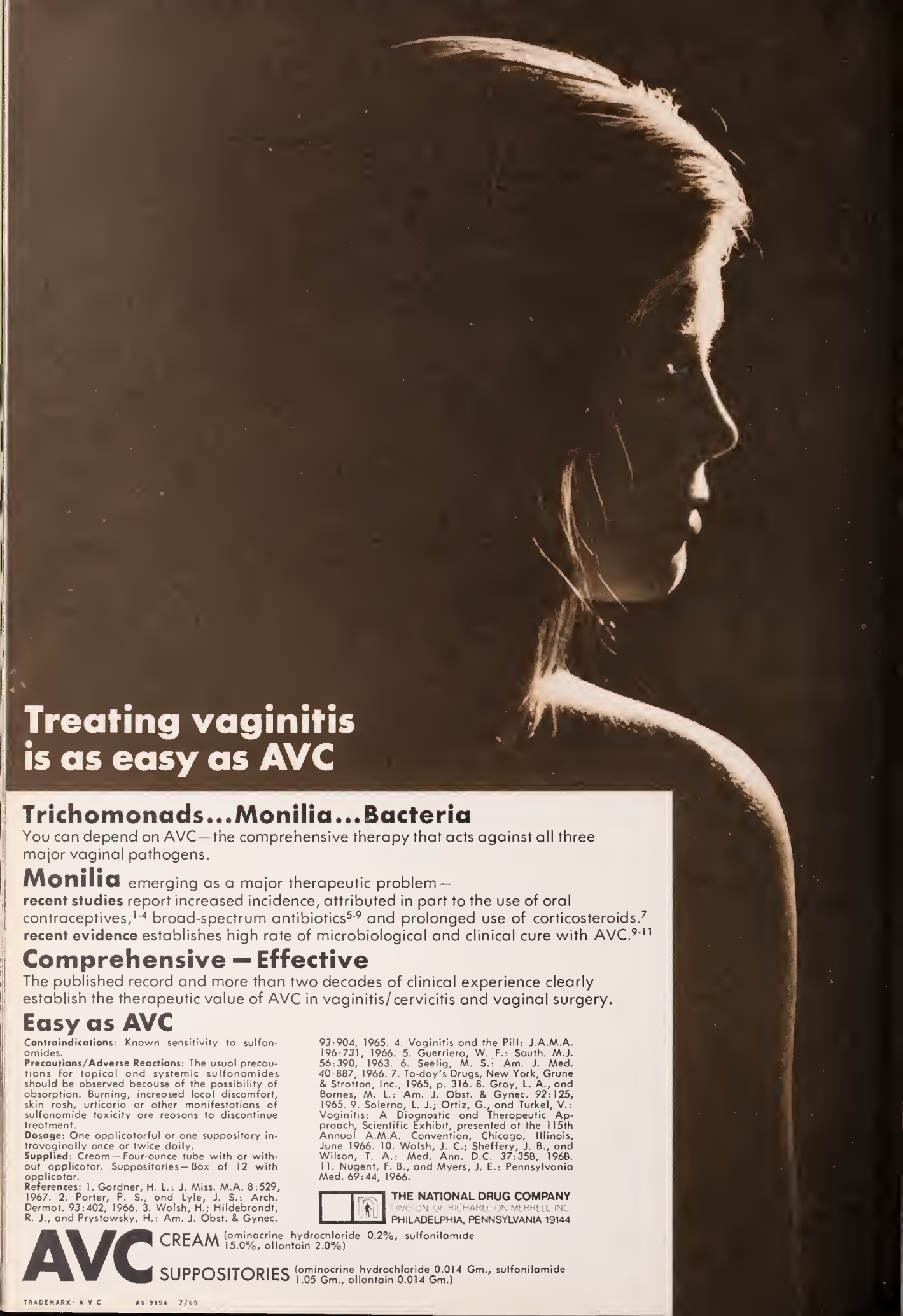
Prescribing Information — Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.



THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

QuinammTM
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps



Treating vaginitis is as easy as AVC

Trichomonads...Monilia...Bacteria

You can depend on AVC—the comprehensive therapy that acts against all three major vaginal pathogens.

Monilia emerging as a major therapeutic problem—**recent studies** report increased incidence, attributed in part to the use of oral contraceptives,¹⁻⁴ broad-spectrum antibiotics⁵⁻⁹ and prolonged use of corticosteroids.⁷ **recent evidence** establishes high rate of microbiological and clinical cure with AVC.⁹⁻¹¹

Comprehensive — Effective

The published record and more than two decades of clinical experience clearly establish the therapeutic value of AVC in vaginitis/cervicitis and vaginal surgery.

Easy as AVC

Contraindications: Known sensitivity to sulfonamides.

Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.

Dosage: One applicatorful or one suppository introvaginally once or twice daily.

Supplied: Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

References: 1. Gardner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., and Lyle, J. S.: Arch. Dermat. 93:402, 1966. 3. Walsh, H.; Hildebrandt, R. J., and Prystowsky, H.: Am. J. Obst. & Gynec.

93:904, 1965. 4. Vaginitis and the Pill: J.A.M.A. 196:731, 1966. 5. Guerriero, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. To-day's Drugs, New York, Grune & Stratton, Inc., 1965, p. 316. 8. Groy, L. A., and Barnes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Solerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. 10. Walsh, J. C.; Sheffery, J. B., and Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.



THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

AVC CREAM (ominocrine hydrochloride 0.2%, sulfonilamide 15.0%, ollontain 2.0%)
AVC SUPPOSITORIES (ominocrine hydrochloride 0.014 Gm., sulfonilamide 1.05 Gm., ollontain 0.014 Gm.)

THROUGH THE MICROSCOPE

(Continued from Page 604)

This was among the findings made public by the Health Insurance Institute. It is based on an analysis of the latest available government statistics on hearing loss in the nation.

According to the Institute, at least 8½ million Americans have serious hearing problems.

Government records show that there are only about 300,000 persons either totally deaf, or with such poor hearing that only a hearing aid will allow them to take part in ordinary conversation.

On the brighter side is the statistic that 95 per cent of those with hearing impairments are not restricted in their everyday activities.

The analysis also showed that whatever the age group, loss of hearing was more prevalent among men than women.

Overall, infections were responsible for causing serious hearing loss in 1 of 5 people with hearing impairments.

Injuries were blamed for hearing impairments in fewer than 1 out of 10 cases, while other conditions were given as causes in 1 out of 3 cases.

Among persons under age 45, 7.5 per cent of all hearing losses were from congenital or birth factors.

BRITISH WARNING AGAINST NATIONALIZED MEDICINE

Columnist Dick West reports in the Dallas Morning News that "the British government reckons that doctors can care for 3,500 patients . . . and pays each doctor \$3 per year for each patient who enrolls with him. "The average doctor's income is only \$12,000 per year" gross and subtracting business expenses only "\$6,500 for his family expenses" remains.

Of the 2,000 new doctors graduated each year, 450 emigrate to America, Australia or Canada.

"If you must have an operation, the average waiting period is 24 weeks—6 months." And "only five hospitals have been built in all of Britain the last 25 years," leaving Britain with "1500 fewer hospital beds today than it had when the socialized medicine system began 21 years ago." West writes "Dallas County has built and enlarged more hospitals than all of England."

The Lancet, publication of the British medical profession, compared socialized medicine with taxi service: "If taxi fares were abolished and a free National Taxi Service was financed by taxes, who would go by car . . . or bus . . . or walk?

... As reported by *Insurance Economic Surveys*, August 1969

HEALTHFUL SLEEP — SOME SUGGESTIONS

Sleep — if you're not getting your share — can affect your health. But usually you can do something about it.

For instance follow these rules suggests the Health Insurance Institute and you may be put to sleep:

- Go to bed — a comfortable one.
- Make sure you're in a quiet, dark room free of noise and temperature change.
- Relax mentally.
- Try being in a moderately fatigued condition — don't exhaust yourself deliberately, but moderate fatigue will enhance sleep.

Mainly, says the Institute, if you really want to sleep, don't think about it.

Now, relaxed, comfortable, you should be able to fall asleep with only a short period of adjustment.

But if you still can't sleep:

- Try a very light, warm late meal, but restrict fluids after 8 p.m. with the possible exception of a glass of warm milk.
- Take a tepid bath (92 to 97 degree fahrenheit).

According to the Institute, studies on sleep show the best "sleeping potion" available is moderate exercise in fresh air.

(Continued on next page)

OFFICE SUITES

**Now Available for Immediate Occupancy
in New Building**

**CUMBERLAND PROFESSIONAL BUILDING
2180 Mendon Road
Cumberland, Rhode Island**

**On Route 122 — Near Route 195 Cut-off —
Next to Cumberland Plaza Shopping Center — 15 minutes from Downtown Providence.**

Wall-to-wall carpet, heat and air-conditioning included — Ample parking.

FOR FURTHER INFORMATION

HOMESITE REALTY, INC.

724-6110

**2230 Mendon Road
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Consultation INVITED

Doctor, you are an expert! Your education, experience and judgement are invaluable. When people need medical advice, they call on you.

We'd like you to call on us for advice and counsel on wines, — their origin, taste, aroma, bouquet, . . . the proper wine for each event. We specialize in wines. We have more than 1600 types from which you can select. If you'd like to come in and browse, come on in. Join our Vintage Guild. It doesn't cost a cent, and it could become a real adjunct to the gracious living you deserve.

Consultations invited. No appointment necessary.



The average person, say medical authorities, requires about eight hours of sleep daily, but it cannot be stored up in advance and any deficiency should be made up within 24 hours.

A recent study shows that how well you sleep depends on your age, health condition and emotional state.

Older persons, for example, were found to have fewer dreams. They also slept more lightly than the younger generation.

Poor health was often responsible for breaking up sleeping patterns — while emotional depression also had a similar effect.

Other studies show there is no scientific evidence to support the theory that warm milk or other beverages before retiring promote sleep — but there are indications that they may have psychological benefits.

A slow stroll before retiring is recommended as a good way to prepare for a night's sleep. But strenuous physical exercises should be reserved for mornings, when circulation should be stimulated.

Nighttimes are for slowing down, relaxing and z-z-z-z-z-z.

DID YOU KNOW?

- Many people in the United States are seriously underinsured against loss of income should they become unable to work because of illness or injury.

- The main reason, says the Health Insurance Institute, is that most of them do not increase their disability insurance to keep pace with their rising incomes.

- Benefits from disability plans may be applied to hospital-medical bills, or day-to-day household or business expenses — however the insured person decides.

- Individual disability policies can pay benefits up to \$800 to \$1,000 a month for disabilities lasting more than six months.

- Although benefit payments may be higher, maximum amounts are ordinarily designed to pay between 40 to 60 per cent of a person's earned income before taxes.

- Persons applying for group coverage do not have to take a physical examination, but those interested in individual policies may have to, depending on their age and amount of benefits desired.

- Insurance companies paid \$1.4 billion in disability income benefits to disabled Americans last year.

- At the end of 1968, a total of 55,667,000 people in this country had some form of short term disability income protection — mainly through group coverage.

— Health Insurance Institute

Hoechst is proud to be able to offer
nearly 100 years of patient-centered research
to "bridge" the sometimes awesome chasms of medicine.



*"Life is short and art is long;
the crisis is fleeting,
experiment risky,
decision difficult."*

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Major discoveries of Hoechst world-wide research include
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District Medical Society Meetings

PROVIDENCE MEDICAL ASSOCIATION

A regular meeting of the Providence Medical Association was held at the Rhode Island Medical Society Library, Providence, on Monday, October 6, 1969. The meeting was called to order by the President, Dr. Nathan Chaset, at 8:35 p.m.

Minutes of April Meeting

Doctor Chaset noted that the minutes of the April meeting had been printed in the RHODE ISLAND MEDICAL JOURNAL, and therefore a reading of them at the meeting would be omitted.

Report of the Secretary

In the absence of the Secretary the executive secretary, John E. Farrell, reported.

He read the following report:

At a recent meeting the Executive Committee reviewed applications from physicians seeking active membership and also from physicians requesting Junior Associate Membership.

The Committee was informed by the Treasurer that the 1968 audit of the Association's financial records had been completed and a favorable statement was given regarding the accounting of the finances.

One member was granted an extension of time for the payment of dues because of illness and one member was dropped from membership by reason of his departure from Rhode Island.

The Committee approved of a financial report of the Medical Bureau which completed its fiscal year on August 31, and it was also informed that due to an attempted intrusion of the Bureau on Labor Day evening, security measures have had to be taken, and are continuing.

A report on the successful golf tournament and annual dinner was received and approved.

A resolution from the Providence School Committee was referred to the President for clarification and report at a later date.

Action: The report of the Secretary was received and placed on record.

Election of New Members

The Executive Secretary reported that the Executive Committee recommended for election to active membership the following physicians:

Antonia Maria Ciancarelli, M.D.

Norman J. Cowen, M.D.

Serafino Garella, M.D.

Arthur I. Geltzer, M.D.

K. Khodarahmi, M.D.

Catherine LaRoche, M.D.

Maria L. V. Nunez, M.D.

David G. Quigley, M.D.

Helen I. Schinazi, M.D.

Jorge H. Sturam, M.D.

He also reported that the Executive Committee recommended for election to Junior Associate Membership the following physicians:

Katherinne Bury, M.D.

Nery H. Gomez, M.D.

Youssef H. Georgy, M.D.

James R. Hampton, M.D.

Peter A. Pizzarella, M.D.

Michael A. Rocchio, M.D.

Robert V. Stephens, M.D.

Morton M. Slutsky, M.D.

Action: A motion was made, seconded and voted that the applicants for active membership and for junior associate membership be elected.

Announcement by President

Doctor Chaset stated that he reported with deep regret the loss by death since the April meeting of the following members:

Vincent J. Ryan, M.D.

Llewellyn J. McGovern, M.D.

William P. Buffum, M.D.

Nathaniel Malinou, M.D.

William A. McIntyre, M.D.

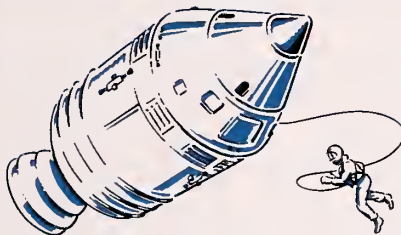
Doctor Chaset called for a minute of silent prayer in memory of the deceased members.

Scientific Program

Doctor Chaset introduced William A. Regan, LL.B., a practicing trial lawyer and a specialist in the field of hospital law, Judge James C. Bulman, associate justice of the Rhode Island Superior Court, and Kirk Hanson, chairman of the Medical Legal Committee of the Rhode Island Bar Association, all of whom comprised a panel for the discussion of Medical Malpractice.

Mr. Regan reviewed the problems facing the physician in his hospital affiliations, noting that once given privileges of staff membership he seldom loses them, nor does he have them evaluated or modified. Mr. Regan maintained that there should be continued surveillance by the staff over its members to guarantee quality care. Suspensions and dismissals, in his opinion, are basically the responsibility of the staff, and not the corporation. Recommendations, he said, to trustees relative to professional staff difficulties should follow the protocol set forth in the staff bylaws regarding proper communication in such matters. In the case of an accident in hospital care the truth is the best foundation on which to build a defense, and positive

(Continued on Page 609)



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages

complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.



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Manufacturers of Ethical Pharmaceuticals



Appearances may be deceiving



**It may be tetracycline
but it's not ACHROMYCIN[®] V
Tetracycline HCl
unless it bears this signature.**



250 mg. and 100 mg. capsules

Contraindications: Hypersensitivity to tetracyclines.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons.

Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Nonsusceptible organisms may overgrow; treat superinfection appropriately. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Side Effects: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN.

Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.



LEDERLE LABORATORIES
A Division of American Cyanamid Company
Pearl River, New York 10965

**"coughing
is not a harmless
privilege"**

—Current Therapy 1967, ed. by Conn, H. F., P. 88—

**if cough
serves no useful
purpose**

Rx **Tussionex**[®]

(Resin complexes of Hydrocodone and Phenyltoloxamine)

**... it works
(usually
for 10 to 12
hours*)**

TUSSIONEX SUSPENSION/TABLETS: Each teaspoonful (5 cc.) or tablet of TUSSIONEX contains 5 mg. hydrocodone (Warning: May be habit-forming) and 10 mg. phenyltoloxamine, both as cation exchange resin complexes of sulfonated polystyrene.

Class B narcotic — oral Rx where state laws permit.

INDICATIONS: Coughs associated with respiratory infections including chronic sinusitis, colds, influenza, bronchitis, and cough resulting from measles, pulmonary tuberculosis, bronchiectasis, and bronchogenic carcinoma.

***DOSAGE:** *Adults:* 1 teaspoonful (5 cc.) or tablet every 8-12 hours.
Children: Under 1 year: 1/4 teaspoonful every 12 hours.
From 1-5 years: 1/2 teaspoonful every 12 hours. Over 5 years: 1 teaspoonful every 12 hours.

SIDE EFFECTS: May include mild constipation, nausea, facial pruritus, or drowsiness.

For complete detailed information, refer to package insert or official brochure.

Strassenburgh

Strassenburgh Laboratories Division
Wallace & Tiernan Inc., Rochester, N. Y. 14623

PROVIDENCE MEDICAL ASSN.

(Continued from Page 608)

steps should be indicated to prevent a recurrence of an error or accident.

Judge Bulman reviewed the 1966 Rhode Island legislative action which established the discovery procedure by which the plaintiff may set forth a plain statement of claim, and interrogations, depositions and discussions may set up a basis for a possible trial stage. He expressed the opinion that the present system of a pre-trial attempt to settle issues is a fairer procedure. He also discussed Public Law 230 passed by the General Assembly this year whereby the use of medical texts may be introduced as potential expert testimony to support a claim, provided defense counsel is notified of such introduction 30 days prior to presentation. Judge Bulman stated the legislation is a matter of concern to the Court which must determine whether the testimony is relevant and whether the author is an authority on the subject.

He also discussed the cases involving *res ipsa loquitur*, the Rhode Island Supreme Court decision regarding the right of the unborn child to sue for lack of proper medical care, and the Court ruling on the statute of limitations. Regarding the limitations statute he pointed out that the two year rule is no longer absolute; instead the Court recognizes that the statute may run from the date of discovery of injury, or when, with reasonable diligence on the part of the patient, the injury should have been discovered.

On the matter of informed consent, he suggested that the physician explain adequately all risks involved in a treatment and that he secure the patient's permission to continue such treatment. The ability to convince a jury that every reasonable effort was made to inform the patient of "side effects" of a drug, or surgical procedure, is important.

Mr. Hanson commended the mediation committee, insurance carriers and legal counsels for their work in resolving fairly alleged malpractice cases. He said the policy of settling promptly when an error occurs, and to defend strongly when it is not apparent, works to the advantage of patients.

Mr. Hanson urged doctors to be diligent in seeing that their case records are complete and accurate. Under the discovery procedure he noted that records are viewed by many parties in a pre-trial hearing, and later by a jury. Therefore all records must be complete and honest. He cited conflicts in hospital records with testimony of a defendant physician, bad billing practices by a doctor, failure of the physician to communicate in a manner the patient can understand, lack of sympathy with the patient's problem, cutting corners to save the patient expense, lack of knowledge of

the serious side effects of some new drugs, and exaggeration of the extent of an injury to justify a higher payment to the patient by a third party, as factors contributing to unfortunate malpractice situations.

Doctor Francis B. Sargent, chairman of the Mediation Committee of the Rhode Island Medical Society, briefly discussed some of the issues raised by the panelists, who also answered questions from the audience.

Report from Biafra

Doctor Chaset introduced Dr. Paul Dudley White of Boston who had requested permission to meet with the Association and to present Dr. Nlogha E. Okeke who had this day flown to Boston from Biafra.

Doctor Okeke discussed the serious situation that exists in Biafra as the result of the Nigerian War, and he related the lack of medical and hospital supplies. He stated he had come to America to seek funds from physicians and other interested citizens to supply the immediate medical needs of the country.

Adjournment

The meeting was adjourned at 10:50 p.m.

Respectfully submitted,

JOHN E. FARRELL,
Executive Secretary

Collation was served.

Attendance 52.

Taste!

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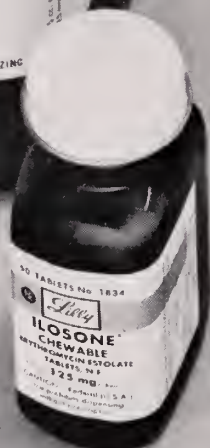
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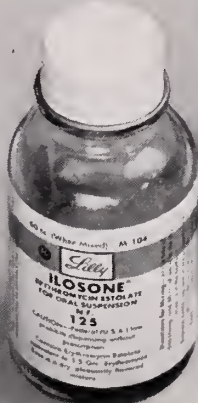


Each 5 cc. contain erythromycin estolate equivalent to 125 mg. erythromycin base.

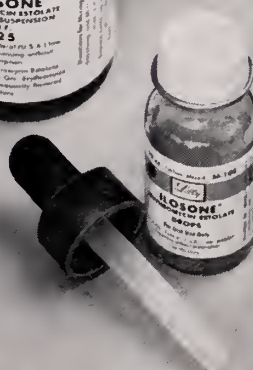


Each tablet contains erythromycin estolate equivalent to 125 mg. erythromycin base.

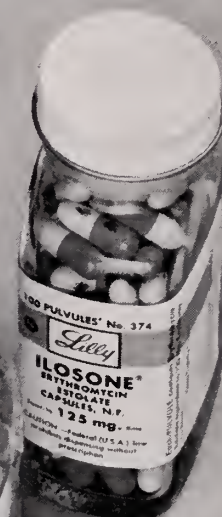
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THE SECOND SAMUEL ADELSON MEMORIAL LECTURE*

THE SURGEON'S ROLE IN THE EVOLUTION AND MANAGEMENT OF DISEASES BROUGHT TO LIGHT BY THE CONQUEST OF OLD ONES

Continuing Education Essential for Awareness of Medical Advances and Newly Emergent Syndromes

F. A. SIMEONE, M.D., of Providence, R. I.
Surgeon-in-Chief, The Miriam Hospital; Professor of Medical Science, Brown University.

Seven years ago, Doctor Samuel Adelson delivered his presidential address before the Rhode Island Medical Society. The address occupies less than two full pages of the Journal, but in it, among other matters, he described the effort that the practicing physician had to make to stay abreast of developments in Medical and Surgical practice and to continue as an effective servant of his community. It was fitting that Doctor Adelson should dwell on this subject, for a more effective doctor than himself would have been difficult to find in any community.

Doctor Adelson graduated from the Tufts Medical School in 1922 and after a rotating internship came to practice in Newport where on the basis of demonstrated ability he gained the admiration of patients and peers alike.

Doctor Adelson was a scholar, a student of the Bible. He had a receptive, alert mind which gave rise to the restlessness necessary for success, and with the motto "per aspera ad astra" he achieved such distinction as to be chosen by his peers in 1961 to lead them as President of the Rhode Island Medical Society. Doctor Adelson is missed not only by his colleagues but by the community at large which he served as President of the City Council and as member of the School Committee. He would have found the topic I have chosen for this Lecture very dear, since it concerns the importance of continued intellectual activity on the part of the physician in order to maintain the degree of excellence required for the modern practice of medicine. Therefore, I feel honored by the privilege of presenting the second Adelson Memorial Lecture.

PREPARATION FOR THE PRACTICE OF MEDICINE

Graduates in Medicine leave the educational environment and start their careers in practice at various stages of development. It is rare today for a medical graduate to enter practice directly after graduation from medical school. Some enter practice after a one-year internship; most do not enter practice until completion of a year or two of assistant residency in Medicine, Surgery, or one of the specialties. Many will have completed formal residency programs in Medicine, Surgery, the Specialties, or in General Practice before undertaking to care for the sick. Apology is not needed for our present programs of undergraduate and graduate education. From them the sick and injured throughout the world have gained countless benefits. We have every right to be proud of the men and women in our programs and of the contributions they have made to useful knowledge. However, there are inherent dangers to our system, and it is well to be aware of them so that they might be precluded. I refer here to the possibility that, having completed an outstanding medical curriculum and graduated from an advanced residency program, the physician may fall victim to a not uncommon disease: "Elephantiasis Capitis," manifested by the illusion that, having graduated, he has become completely learned and no longer has use for education. The contrary is true. Never before this time has there been a greater need for continuing medical education. New knowledge has increased by geometric progression in the past century, and by far has exceeded that accumulated since recorded history. The developments in medicine expected in the next quarter century related to the

(Continued on next page)

*Presented at Newport Hospital, June 25, 1969.

understanding and control of disease and to methods for delivery of medical care surely will equal and even exceed those of the past quarter century. The physician who expects to care for the sick and injured and maintain high standards of excellence for four or more decades after graduation without continuing self-education is deluding himself. Fortunately, most medical curricula and programs of graduate study now emphasize the necessity of self-education and the importance of developing attitudes for continued education throughout one's active life.

NEW VISTAS AND NEW CONCEPTS

Many observations can be brought to bear on the many developments both of concept and of technique which have exacted a constant vigilance on the part of the surgeon who wishes to keep abreast of advances in Surgery. Almost daily, technical advances open new fields for him to help develop. Two decades ago Cardiovascular Surgery was in its infancy. Today the previously highly specialized procedures in the field have become commonplace, and devoted men and women constantly provide more and more information to guide our thinking. For example, last year to accommodate the increasing numbers of excellent contributions to cardiovascular surgery the American Heart Association at its Annual Scientific Assembly had to provide an extra day of meetings for its Council on Cardiovascular Surgery. For lack of space only 40 of the 61 surgical papers presented could be published in "Cardiovascular Surgery 1968," published as an annual Monograph by the American Heart Association.¹ Cardiac transplantation has been demonstrated to be a technically feasible procedure, if not brilliantly successful. Renal transplantation and retransplantation have been shown to be not only technically feasible but therapeutically sound. Great vistas have opened in this field, and the surgeon must stay abreast of details if he is to take advantage of them, participate in their unfolding, and apply the new knowledge to the care of the patient.

MODERN THERAPY AND THE PRICE IT EXACTS

But the very magnitude of the mass of information and its application which all but overpower the physician create problems to which he constantly must be sensitive. In medical therapy, as in other walks of life, "one never gets something for nothing." The brilliant results of "miracle drugs" such as the chemotherapeutic agents and the antibiotics are commonly marred by the fairly frequent untoward reaction and the rare lethal effect of their use. The internist and the surgeon must be alert to the possibility of a cause and effect relationship between the therapeutic agent and the reaction, so that he properly may calcu-

late the risk the next time he finds need for the therapeutic agent.

Familiarity with the natural history of disease is essential if an untoward event is to be identified and its relation to a therapeutic agent is to be recognized. Surgical procedures are not exempt from complications, new complications for new procedures. The cardiotomy and pericardiotomy syndromes are examples of untoward effects of operations upon the open heart. A particularly distressing complication is that following relief of an obstructing lesion such as coarctation of the aorta. A necrotizing vasculitis may develop in the splanchnic area in the early postoperative period and may lead to fatal intestinal necrosis.² These events have been established from the standpoint of cause and effect, but the mechanisms involved are not at all clear. Nevertheless, it is important to recognize them. Treatment based upon unquestionable fact must await clarification of the mechanisms. In the meantime, treatment must be administered on reasonable albeit empirical grounds.

OLD LAMPS FOR NEW

It is safe to state that by the time a surgeon has been in practice twenty years he will have exchanged for new nearly half the procedures he learned as intern and resident. Examples of this are legion. The irrational subtotal gastrectomy with its various forms of gastro enterostomy for benign ulcer has been replaced by the vagotomy with or without hemigastrectomy and with a suitable procedure to provide drainage for the stomach.

The remarkable advances in vascular surgery have made sympathectomy for obliterative arterial disease a far less common procedure, for the operation has been exchanged for the newer procedures of direct arterial surgery, "old lamps for new." In the process of being exchanged are the radical mastectomies for cancer of the breast for new procedures based upon better, although imperfect, understanding of the biology of cancer and upon the clinically demonstrable and the estimated extent of the disease. To take advantage of this kind of progress in Surgery, the surgeon must be alert and sensitive to changing concepts.

Until the principles will have become indisputable, the surgeon must be able to weigh the evidence on his own. He must be able to sift the wheat from the chaff before exchanging his old lamps for new. For this, experience in research is invaluable. Time devoted to this by the surgeon in his formative years is well spent. The purpose of time devoted to research is not to make great discoveries in the brief period of six months or of a year or two devoted to such activity, nor to spend the time necessarily at the laboratory bench if the medical graduate is not so inclined. The purpose

is to teach the initiate how to ask a question, how to marshal available evidence, how to arrive at the formulation of a hypothesis, and how to design an experiment which will yield data needed to test the hypothesis. The experiment may be an activity in the experimental laboratory, or it may be a clinical set of observations specifically designed for statistical evaluation. With this kind of preparation the physician will be able to take full advantage of real advances reported by others and will not be led astray by reports of wishful thinking which do not stand his statistical scrutiny.

A classic example of how the surgeon can be led astray by statistical mirages was the concept that, whenever a major artery needs to be interrupted, the concomitant vein should also be tied in order to achieve optimal circulation. This belief was based on observations concerned with wounds of the arteries in the Boer War (1899-1902) and in World War I (1914-1918). The experience very well illustrates the problems encountered when a study is not designed with statistical foresight. Table I shows some of the data on which the concept was based.

There appears to be improved limb survival among casualties who had ligation of the vein as well as the artery ("quadruple ligation"). But when the relevant factors are sorted out, then the advantages of concomitant vein ligation vanish (Table I, American experience in World War II). When tested experimentally, ligation of the concomitant vein does not improve the circulation when the femoral artery is occluded. In fact, while demonstrating a decrease in circulation when the normal femoral artery is occluded, one can show that the circulation is made still worse when the companion femoral vein is simultaneously occluded.⁴ The physician or surgeon trained in research would not be led astray by unsound statistical data.

THE EMERGENCE OF NEW SYNDROMES

Clinical and laboratory research have led to the conquest of many diseases (poliomyelitis) and the successful treatment of many conditions. Most interesting and challenging to the surgeon are the new conditions which emerge because previously lethal conditions are successfully managed and permit the former to come to light. A well known example is renal tubular necrosis following trauma. This was recognized as an entity in the "Crush Syndrome" by Bywaters and his colleagues at the time of the Battle of Britain.⁵ Those were the early days of modern resuscitation after trauma. Casualties survived crushing injuries, incurred when people were caught beneath rubble in the Battle of Britain, only to develop a renal failure which commonly proved fatal. Experience with casualties later in the Second World War revealed an ana-

logous condition among seriously wounded casualties who had been resuscitated from shock. The condition was called "lower nephron nephrosis," "hemoglobinuric nephropathy," "shock kidney," or "acute renal tubular necrosis." Anatomically the condition was comparable to the renal lesion of a mismatched transfusion and similar to the renal lesion in untoward reactions to sulfonamides. Once the condition was recognized, its treatment became rational. Casualties were no longer drowned by excessive parenteral fluid administration in efforts to "awaken the kidneys." Fluids were withheld judiciously; and, instead of death ensuing by the 3rd or 4th day of the anuria, patients began to survive until renal tubular regeneration became sufficient to establish diuresis by the 10th or 12th day; and casualties often survived the anuria. Further improvement came with a better understanding of azotemia and its dietary management. Finally, the artificial kidney was added and is now extensively used for hemodialysis; patients with post-traumatic anuria, renal tubular necrosis, are ideal candidates for such therapy. This kind of renal failure would not have come to light when it did if successful treatment of trauma and shock had not been developed.

Another condition, a contemporary one, can serve as an example of serious problems which emerge when previously lethal conditions are successfully treated. I refer to the pulmonary complications in seriously wounded casualties who are successfully resuscitated from very severe wound shock. This condition is especially important because therapeutically, if not etiologically and pathologically, it presents the same pulmonary problems one encounters in patients with severe burns, shock secondary to overwhelming infection, and other critical illnesses.⁷

The significance of pulmonary complications among the severely wounded came to the fore in Vietnam. There, casualties arrived at a hospital installation within a few minutes after exsanguinating injury and in deep shock. Such casualties would never have survived the chain of evacuation in the
(Continued on next page)

TABLE 1
Results of ligation of comparable arteries with and without ligation of concomitant veins in World War I (British Experience) and World War II (American Experience).

Ligation	World War I		World War II	
	Number of cases	Percent came to amputation	Number of cases	Percent came to amputation
Artery alone	101	28.7	26	69.2
Artery and vein	71	19.7	56	66.1
All ligations	661	15.4	1602	49.3

two World Wars or in the police action in Korea. These casualties required extraordinary volumes of blood and other fluids for resuscitation. However, despite correction of the exsanguination and the restoration of satisfactory circulation, some of the casualties showed progressive hypoxemia which became unresponsive to artificial ventilation and led to death from respiratory failure. The pulmonary changes can be described as "congestive atelectasis," are seen among civilian casualties as well as in the war wounded, and can be demonstrated in experimental animals.⁸

The etiology of the pathologic changes is not known. Excessive use of crystalloids had been implicated, because these were used in large amounts in some of the cases; but the condition was found among casualties for whom crystalloids were used sparingly. The pathologic picture is reminiscent of the effects of blast; and a large proportion of the casualties showing this condition could represent a state of increased capillary, arteriolar, and venular fragility after the poor tissue perfusion caused by hemorrhage and made manifest by restoration of circulation by transfusion.

Characteristically, the oxygen tension in the arterial blood of such patients falls and fails to rise to the expected levels when the inhalation gas mixture contains 100 per cent oxygen. A physiologic pulmonary arterial shunt exists presumably because of the perfusion of congested atelectatic alveoli. The persistence of ventilation at increasing tracheobronchial pressures and with increasing concentrations of oxygen may do more harm than good. It is best to be satisfied with relatively low partial pressures of oxygen in the arterial blood (60 mm. Hg.), and to institute changes in ventilation only if the value falls below this or remains at this level for any length of time. Artificial respirators should be arranged to function with increased tidal volumes at low respiratory rates, without increasing the inspiratory pressure, and without increasing the percentage of oxygen in the mixture above 30-50 per cent except as a last resort.

THE TREATMENT OF SHOCK

The evolution of the syndromes described may be attributed to the significant advances made in the treatment of shock, and it is well to consider this briefly because of its relevance to the treatment of the critically ill. Shock, or acute circulatory failure, is not a new disease. Over the years it has been associated with the effects of trauma and hemorrhage, such as result from gunshot and other accidents or acts of violence. Until recently this kind of shock, wound shock, occupied the attention of surgeons almost exclusively. While much still needs to be learned about wound shock both hemodynamically and metabolically, reasonably

satisfactory basic regimens have evolved for the treatment of such patients.⁹

Today the surgeon must still contend with the control of hemorrhage in wound shock, and occasionally uncontrollable hemorrhage becomes a decisive factor in survival; but he seldom has to treat a patient in wound shock which has become intractable because of prolonged inadequate treatment. The need for prompt and adequate therapy in this kind of shock has become well established. The patients who now tax his abilities are those in shock from severe infection and with contributing cardiac failure. These patients are complex because added to the effects of inadequate tissue perfusion are the humoral systemic effects of the infection.

It is fair to state, that the surgeon and his medical colleague are partly responsible for the increase in the number of patients encountered in septic shock. The number of aged people in the population has increased; more patients with debilitating diseases are among us; and adults and children with hematologic and chronic diseases have further increased the size of a population particularly susceptible to overwhelming infection. These are the patients who are readily invaded by gram-negative and other bacteria and who develop infections attended by high morbidity and mortality.

Much has been learned about the treatment of patients in shock; certain principles have become well established while others are still debatable. The importance of blood flow to provide perfusion for living tissues and organs is generally recognized. Emphasis is placed on flow and not pressure. Under basal conditions a flow of 50 ml. per kg. of body weight, and for short periods flows as low as 30 ml. per kg., are satisfactory. The important principle to bear in mind is the fact that the business of the cardiovascular system is conducted across the single-layered wall of the capillary. The transfer of gases, substrates, and products of metabolism occurs across the capillary wall, and blood flow is essential for this. Blood pressure is a means to an end. Its importance lies in the fact that it is necessary for maintaining blood flow, this being directly proportional to pressure and inversely proportional to the resistance to flow offered by the blood vessel.

This concept is a fundamental one. Upon it is based the objection to restoring blood pressure to normal by means of drugs which increase the resistance at the arteriole, for this is likely further to decrease the flow of blood in capillaries, the metabolically all-important part of the circulation. Thus, for the usual forms of shock the use of agents which improve the blood pressure by causing vasoconstriction is inadvisable. The converse, the use of vasodilators, can be supported theoretic-

cally. The decreased vascular resistance produced thereby would promote blood flow through capillaries so long as pressure remained above a mean level of 50 mm. Hg., for this is approximately the critical opening pressure for vessels in most vascular beds. Below this level there would be no blood flow in most tissues regardless of the degree of vasoconstrictor paralysis.

Our clinical experience with one vasodilator, phenoxybenzamine, or Dibenzyline,[®] has not been encouraging except with one group of patients in shock, those with a significant element of heart failure. Among these the results have been encouraging and often dramatic. These patients exhibit hypotension, cold mottled skin, a decreased cardiac output, oliguria or anuria, and in particular a high central venous pressure.

The use of corticosteroids in shock finds many proponents. There is general agreement among those who support their use that in order to be effective they must be used in truly massive quantities, of the order of 15 to 30 mg. of methylprednisolone or 3 to 6 mg. of dexamethasone per kilogram of body weight. It is believed that in these amounts the steroids act as blocking agents, blocking the effects of sympathetic nervous activity rather than the actions of circulating catecholamines.

The corticosteroids are also believed to promote stability of cell membranes including those about intracellular organelles. Thus they promote stability of the lysosomes so that these bodies do not break down and release their destructive enzymes which can cause cellular death. Pharmacologic agents used judiciously, whether they be alpha blockers or beta blockers, may be helpful in specific instances. The steroids, too, may be adjuvants. Certainly they are indicated when there is known or suspected deficiency of these potent hormones. But the mainstay of therapy for shock remains the administration of blood, plasma, crystalloids, and electrolytes according to the need for replacement of absolute or relative deficits when the total blood volume may be normal but insufficient to provide adequate venous return for a normal cardiac output, or when the cardiac output may be within normal limits but inadequate for satisfactory perfusion of all essential vascular beds. The patient in other words can be in shock, often called "irreversible shock," with normal or greater than normal blood volume and cardiac output, as in the case of forward failure of the heart. This situation is not at all uncommon in our intensive care units where the critically ill are treated and attended.

How is the physician to be guided when his patient is in shock and determinations of blood volume and cardiac output are normal or supranor-

mal? He is in the dilemma of debating whether or not he may administer more blood or other fluid to increase the venous return to the right side of the heart and increase the cardiac output. He will derive greatest assistance from monitoring the central venous pressure. Measurements of central venous pressure among the critically ill with circulatory failure have been the most useful single measurements for guiding therapy for the patient in shock. So long as the central venous pressure is low or normal more venous return can be provided in the hope of increasing cardiac output and tissue perfusion. On the other hand, if central venous pressure is much above the accepted limit of normal, 10-15 mm. Hg., it is futile to increase the venous return by the intravenous administration of more fluid. In fact, withdrawal of blood may be necessary in such cases in order to decrease the filling pressure of the right ventricle and bring the presystolic myocardial fiber length to a more favorable position on Starling's curve. We believe the favorable action of phenoxybenzamine in those cases with increased central venous pressure may be attributed to an "internal phlebotomy" when the capacity of the venous reservoirs is increased by the drug.

The central venous pressure is related to venous return, to circulating blood volume, to cardiac output, and to venous tone; but the measurement cannot be used to indicate whether any of these is normal or abnormal. It can be used only to indicate the filling pressure of the right atrium and ventricle, and this is of vital importance for the decision of whether or not to administer more intravenous fluid. If the assumption of normal myocardial compliance is made, the measurement becomes an index of presystolic fiber length. This is the information that the physician needs to guide him in the decision of whether or not the administration of more fluid intravenously can be beneficial or harmful. As for most tests, one has to be aware of pitfalls. The absolute value of the measurement must be related to the zero point of reference. The pressure will be high when the chest is opened and when positive pressure anesthesia is used. It will vary with position of the patient, with coughing, and with straining. But being aware of these hydrostatic matters, the physician will not be misled. It is important to remember, too, that a normal filling pressure of the right ventricle is not tantamount to assurance that all is well in the central circulation. The right ventricle may function well and keep the pressure normal in the atrium and in the intrathoracic cavae, while the left ventricle is failing and pulmonary congestion and edema are developing. For this reason auscul-

(Continued on Page 618)

PERCUTANEOUS RADIO FREQUENCY CERVICAL CORDOTOMY*

Reliability and Safety of Low Anterior Approach Indicates Usefulness to Debilitated Patients

ROBERT H. STURMAN, M.D., of Waterbury, Connecticut. Attending Neurosurgeon, Waterbury Hospital.

Since 1912, when first reported by Spiller and Martin,¹ the technique of surgical antero-lateral cordotomy has been used successfully in the treatment of intractable pain. Until recently this attempt to relieve pain has been available to only a select few — those who could tolerate a major surgical endeavor involving mortality and morbidity of significant degree. Additional dangers of weakness of an extremity or loss of sphincter control added to the need for selection. These factors deprived many patients of relief because of their debilitated, often terminal, condition when they most needed relief from pain.

In 1963, Mullan et al.² described a technique of inserting a radio-active needle (strontium 90) under roentgen control into the high cervical spinal canal adjacent to the spino-thalamic tract for relief of pain. Later the procedure was simplified by Mullan and Rosomoff^{3,4} by utilizing an electrical current inserted into the cervical spino-thalamic tract. Lin et al.⁸ later described an anterior approach lower in the cervical spinal cord using radio-frequency current.

Utilization of bilateral *surgical* high cervical cordotomy for relief of pain with subsequent involuntary respiratory impairment has been well documented in the literature.^{5,6,7} In the same manner use of bilateral percutaneous cordotomy at high cervical levels above C4 again reveals evidence of impaired involuntary respiration as a complication to be seriously considered.

Recently Mullan et al.⁹ has reported involuntary respiratory dangers with *unilateral high cervical percutaneous cordotomy* in the presence of cardiovascular or respiratory insufficiency.

Therefore, if one anticipates bilateral percutaneous cervical cordotomy, one lesion must be below C4, i.e., C4-5 interspace if one is to prevent loss of involuntary respiration. If unilateral percutaneous cordotomy is anticipated with pulmonary complications, the unilateral lesion should be made as low as possible, preferably C4-5 or lower.

This report deals with the application of a radio frequency current using anterior and mainly lower cervical cordotomy as described and utilized by

Lin et al.⁸ in a series of 48 procedures involving 31 patients. A few cases requiring high levels at C2-3 were also performed using the anterior approach.

TECHNIQUE

The electrode consists of a combination of a standard uninsulated 3 inch 18 gauge thin walled lumbar puncture needle through which is inserted a steel wire stylet .016 inches in diameter. The stylet protrudes 3 to 4 mm. beyond the point of the needle and is insulated with Teflon,[®] except for the last 2 mm. Two types of stylets can be used interchangeably. One is straight; the other is curved at the end so that the lesion can be made at least one or perhaps 2 mm. to either side of the alignment of the needle, depending upon which way it is turned. The five hundred thousand cycle radio frequency generator is used (Radionics, model No. RFG-2A). The current is monitored on an incorporated milliamperere meter.

The patient is placed supine on a stretcher with his head on a Franklin head unit immobilized by standard head clamp. The lateral x-ray tube is measured at the standard 40 inches, the same distance as the head unit. The anterior portion of the neck is prepared and draped, and local anesthesia is applied to the area using one per cent procaine. The needle is inserted medial to the carotid sheath and lateral to the trachea and esophagus in the cervical region. The needle tip is then introduced into the intervertebral disc space in the cervical region directed diagonally through the disc aiming toward the target point. Using vectors, the angle is calculated and corrected and drawn on paper.¹⁰

Multiple Polaroid[®] films are taken during the insertion of the needle to determine direction to the target. When the spinal subarachnoid space is reached, spinal fluid flows from the needle. Ten millimeters of air are then injected, and repeat Polaroid[®] films are taken to determine the anterior margin of the spinal cord. When the target is reached, the electrode is inserted. Again films are taken to determine electrode position, and a bi-polar mechanism is then employed with one lead of the radio frequency current attached to the needle and the other attached to the protruding wire. The lesion is accomplished by using a 20

*Presented at the 158th Annual Scientific Assembly of the Rhode Island Medical Society, at Providence, R.I., May 7, 1969.

second application of current, usually within 60 to 80 milliamps. The patient is tested at intervals during this time to determine the area of analgesia produced. Thus a destructive lesion in the spino-thalamic tract of the cervical spinal cord is accomplished. Utilizing the anterior approach cordotomy can be selective, that is, lesions in the sacral or lower lumbar region can be obtained by placing the electrode more postero-laterally, and lesions in the thoracic or cervical area can be accomplished by placing the electrode antero-medially in the spino-thalamic tract.

RESULTS

Thirty-one patients were subjected to 48 procedures utilizing the anterior cervical approach for cordotomy. Twenty-four patients had unilateral cordotomy; 7 patients had bilateral cordotomy. Of the total of 48 procedures 10 were repeat procedures (Table 1).

TABLE 1

Number of Patients	31
Number of Procedures	48
Unilateral	24
Bilateral	7
Repeat	10

Procedure success rate, i.e., relief of pain, was 66 2/3 per cent. Patient success rate with either bilateral or repeat procedures was 80 per cent. These figures compare favorably with those of other authors (Table 2).

TABLE 2

Procedure Success Rate	66 2/3%
Patient Success Rate	80%

Cordotomy levels varied from as high as C2-3 to as low as C6-7 with 62 per cent placed at C4-5 and C5-6.

Twenty-five, or 80 per cent of the patients suffered intractable pain from metastatic carcinoma. The others singly had pain from sciatic radiculitis, arthritis, causalgia, frost bite, post-herpetic neuralgia, and thoracic radiculitis from a dorsal compression fracture (Table 3).

TABLE 3

Metastatic Carcinoma	25
Sciatic Radiculitis	1
Arthritis	1
Causalgia	1
Frost Bite	1
Post Herpetic Neuralgia	1
Radiculitis	1
(Dorsal Compression Fracture)	1

Fourteen of 16 failures occurred in patients in whom the placement of the electrode appeared accurate, but in whom no definite level of analgesia could be obtained. In the other two we were unable to penetrate the disc space because of arthritic

changes. This is one of the two contraindications to the procedure. The other is the presence of metastatic disease in the cervical spine.

Criterion for success was simply the relief of pain whether sensory level was obtained or not. Of the total of 32 successful procedures no definite level of analgesia could be obtained in 10, but relief of pain was maintained. I have no explanation for this nor has anyone else reporting this phenomenon.

Complications included weakness or paralysis of the ipsilateral leg or respiratory arrest in high cervical cordotomy. Only one patient required a temporary catheter as the result of the cordotomy. Total complication rate was 10 per cent, while serious complication rate was 6 per cent, i.e., respiratory arrest or permanent paralysis.

DISCUSSION

It appears that percutaneous radio frequency cervical cordotomy offers special advantages in the relief of intractable pain, particularly in those patients who are too debilitated with terminal disease to undergo direct *surgical cordotomy*. The procedure with practice is relatively simple, requires minimum equipment at little expense, can be performed in the X-Ray Department with x-ray technicians, and is relatively free from disagreeable side effects or complications.

Utilizing low anterior cervical cordotomy, respiratory complications are minimal. The disparity between procedure and patient success rate is attributed to the early failures of technique, that is, accurate needle and electrode placement, with failure to obtain sensory change and relief of pain with consequent necessity of repeated procedures. The fact that the procedure is relatively simple and can be repeated if necessary enhances its value.

Prior to the institution of this procedure we performed perhaps, at best, 4 to 8 selective surgical cordotomies per year. The 31 patients involved and the 48 procedures reported here were treated in one-and-a-half years. The large increase in the number of patients treated during this period is indicative of the need for a simplified approach to relief of intractable pain. The satisfactory results confirm the value of the procedure.

SUMMARY

1. Thirty-one patients were subjected to 48 percutaneous radio frequency cordotomy procedures for the relief of intractable pain. The great majority of these patients suffered from pain due to metastatic carcinoma.

2. Eighty per cent of these patients, whether subjected to unilateral, bilateral, or repeated procedures, obtained relief from pain, indicating the usefulness of the procedure, especially in the debilitated patient.

(Continued on next page)

3. The lower anterior cervical approach has proved in our hands to be safer and less complicated by untoward side effects than the high cervical approach.

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SURGEON'S ROLE IN EVOLUTION AND MANAGEMENT OF DISEASES

(Concluded from Page 615)

tation of the lungs periodically is an essential concomitant of central venous pressure monitoring. Indeed, constant medical attention is an essential feature of the treatment of a patient in shock.

A final word of warning is in order. The problem at hand is that of treating a patient who is in shock with circulatory failure. It is the patient who is under treatment and not the central venous pressure. Once a normal circulation has been restored, the physician should no longer continue to administer more fluid just because the central venous pressure is still normal or low. When properly used and interpreted, measurement of the central venous pressure has been of inestimable value for guiding therapy in the various forms of severe shock.

You have been gracious in listening to this somewhat rambling discourse. Its central theme has been the observation that the doctor must remain alert, must maintain and continue to develop his acumen if he is to continue to serve his community well. He must remain sensitive to changes and advances in medical practice and to the emergence of entities and syndromes not previously observed, some of them uncovered by the effectiveness of medical care. These qualities he will achieve through continued self-education. No better personification of this theme can be found than the late Doctor Samuel Adelson.

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DOCTOR THOMAS HODGKIN AND SIR MOSES MONTEFIORE

"In Their Lives, Even in Their Death, They Were Not Divided"

An essay titled "An Interesting Friendship — Thomas Hodgkin, M.D. and Sir Moses Montefiore, Bart.," covering some of the same ground was published in 1921 by the late Doctor Jacob Rosenbloom. This was reprinted in the Rhode Island Medical Journal in March 1964 (47:128). The story, despite its human interest, is little known and deserves repetition. — Ed.

In the Cemetery in Jaffa, Israel, is the grave of Doctor Thomas Hodgkin, marked by a granite tombstone (Fig. 1) surrounded by an iron fence. One side of the stone carries the following inscription:

Here rests the body
of
Thomas Hodgkin, M.D.
of
Bedford Square, London
A Man Distinguished Alike
For Scientific Attainments
Medical Skill
And Self-Sacrificing
Philanthropy
Died at Jaffa
The 4th of April, 1866

In the 68th Year of His Age
In the Faith and Hope of the Gospel
The Epitaph is Inscribed by His Deeply Sorrowing
Widow and Brother to Record Their Irreparable
Loss

On the other side is inscribed:

This Tomb is Erected by
Sir Moses Montefiore, Bart.
In Commemoration of
A Friendship of More than 40 Years
And of Many Journeys Taken Together in
Europe, Asia and Africa

This is the story of a famous physician and his friend, of whom he was the dedicated medical attendant and companion for over four decades and with whom he traveled widely. There was a spiritu-

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SIR MOSES MONTEFIORE.

al affinity between these two distinguished personalities of the Nineteenth Century.

Thomas Hodgkin was one of the most prominent physicians of his time in England (1798-1866). As a staff member of Guy's Hospital (1825-1837) he clearly recorded Malignant Lymphoma with involvement of lymph nodes and enlargement of the spleen in a paper he read before the Medico Chirurgical Society of London in January 1832. He described six of his own cases. In 1865 Sir Samuel Wilks (1824-1911), the medical historian, recounting the discoveries of his colleagues with scrupulous fidelity, gave it the eponym "Hodgkin's Disease." And so Hodgkin took his rightful place in English medicine. He also helped to introduce the use of the stethoscope into hospital practice in 1815. He was a dedicated physician, generous to his patients, and somewhat careless in the collection of his fees. In his latter years he gradually abandoned the practice of medicine and devoted himself to philanthropic work. He was an intensely religious man, a member of the Society of Friends, a Christian religious group founded in England by

(Continued on next page)

George Fox about 1650, characterized by the doctrine of "waiting" upon the spirit for direct guidance, opposed to oath taking, and commonly called "The Quakers." He was so imbued with their dogma that he constantly wore their characteristic dress. During the last forty years of his life he devoted his skills to Sir Moses Montefiore (Fig. 2) as medical attendant and fellow companion on all of Montefiore's journeys.

These two distinguished men shared a number of common characteristics. Sir Moses (1784-1888) was the outstanding Jewish personality during a great portion of the Nineteenth Century. He had amassed a comfortable fortune as a broker largely through close collaboration with his brother-in-law, Nathan M. Rothschild. He was able to retire at the age of forty to dedicate the rest of his life to philanthropy. Like his physician, he was a profoundly religious man as evidenced by the coat of arms of the Montefiore family. The hereditary marks of honor which served to denote the descent and alliances of the Montefiore family consisted of "a lion rampant," a "cedar tree" and "a number of little hills one above the other," each of these emblems being accompanied by a Hebrew inscription. Thus the lion rampant has the motto "Be strong as a lion to perform the will of thy Father in Heaven." The hills bear the motto "(When) I lift up mine eyes unto the hills (I ask) whence cometh my help? (Answer) My help cometh from the Eternal." And the cedar tree — "The righteous shall flourish like a palm tree; he shall grow like a cedar in Lebanon."

These emblems are precisely the same as those which Sir Moses had in his personal coat-of-arms, with the exception of inscriptions. It may be that he thought these inscriptions too long to be engraved on a signet, and he substituted for them the words, "Jerusalem" and "Thank."

In 1837 he was Sheriff of the City of London and the first Jew in modern times to be knighted. But in spite of all the honors bestowed upon him and his love of his city and country, his heart was attuned to the condition of his brethren throughout the world. He interceded personally in behalf of the Jews of Russia (1846-1872), the Jews of Morocco (1863), and the Jews of Rumania (1867). As a result of these intercessions his fame spread throughout the Jewish world. He lived to the age of 101 years. Throughout his life he demonstrated the combination of unswerving devotion to his Queen and Country and his wholehearted concern for the welfare of his co-religionists throughout the world. He was grieved when Jews suffered in many countries, but was delighted and grateful to the United States, and to its President, where the Jews enjoyed equality and free-

dom. This is illustrated by the following episode recorded in his diary, for which we are grateful to his Secretary, Doctor L. Loewe:

The news of the attempt on the life of General Garfield, the President of the United States, caused him also much sorrow. He always entertained a high regard for the Americans, and admired their numerous noble institutions. "How many millions of our fellow-beings," he used to say, "found a happy home there when all hope for an honourable maintenance in their own country had to be given up, because the land which gave them birth ceased to give them shelter and protection?"

September 19 — On hearing that the life of the President was in danger, he immediately sent a telegram to the Spiritual Heads of the Spanish and German Congregations of Jerusalem:

"Let prayers be offered up," he telegraphed, "in all Synagogues for President Garfield's speedy recovery."

Mrs. Garfield, to whom Sir Moses subsequently addressed a letter of sympathy, several Senators, and many prominent American citizens, acknowledged this mark of attention most gratefully and expressed their high appreciation of it.

When the President died Sir Moses sent £100 to Mr. Marcus of Boston for distribution among the most deserving charitable institutions of that city, without distinction of race or creed, in memory of the esteemed and lamented President.

During his long lifetime he made seven long journeys to the Holy Land, and on most of them he was accompanied by his devoted physician, Doctor Hodgkin. On February 26, 1866, Sir Moses, who was then 82 years old, left for Dover on his sixth journey to Palestine. There he met Doctor Hodgkin and Doctor Loewe who were to accompany him on the long trip. They travelled via Paris and Marseille to Alexandria. On Sunday, the 18th of March, they left Alexandria and arrived at Jaffa on the next day. It was Sir Moses' intention to proceed to Jerusalem after one day's stay at Jaffa, but his plan was frustrated by the illness of Doctor Hodgkin who contracted cholera. This illness and the death of Doctor Hodgkin which followed deeply affected Sir Moses and were referred to repeatedly in touching terms. Here is what he wrote:

While at Jaffa I had frequently expressed my strong desire either to remain there with my lamented friend, to take him with me to Jerusalem, or to relinquish my journey thither, and return with him to Europe; but all my friends assured me that it would be most imprudent for

Dr. Hodgkin to travel at that time, and that the best and only advisable course was to let him remain in the house of Mr. Kyat, the British Consular Agent, under the most kind and watchful attendance of that gentleman and of his family, with whom he had been staying since our arrival at Jaffa. Advice so earnestly urged I could not but follow. Accordingly, on Sunday, the 25th of March, having previously secured the professional services of Dr. Sozzi, the physician of the Lazaretto, and left my own English servant, and likewise engaged another, to be constantly in attendance on my esteemed friend, I reluctantly quitted Jaffa for Jerusalem, after a farewell visit to my friend, in the full hope of being soon rejoined by him and having for this purpose left for his convenience the Takheerawan (A Sedan Chair), which the Governor of Jerusalem had kindly sent to Jaffa for my own use. This hope, however, was not destined to be realized. Unfortunately the state of health of my lamented friend had not been, previously to his departure from England, as satisfactory as his friends could have wished; and, indeed, he left home to accompany me on my journey, in the hope and belief that the voyage and change of air would prove beneficial to him. I have at least much consolation in reflecting that all that could be done was made available for the preservation of his valuable life.

It has pleased the Almighty to take him from us, and that he should not again behold his loving consort and beloved relatives; he breathed his last in a land endeared to him by hallowed reminiscences. To one so guileless, so pious, so amiable in private life, so respected in his public career, and so desirous to assist with all his heart in the amelioration of the condition of the human race, death could not have been any terror.

I trust I may be pardoned for this heartfelt but inadequate tribute to the memory of my late friend. His long and intimate association with me, and with my late dearly beloved wife, his companionship in our travels, and the vivid recollection of his many virtues, make me anxious to blend his name, and the record of his virtues, with the narrative of these events.

The memory of his lamented friend and physician never left his mind in spite of his many tasks. On May 9, 1866, Sir Moses arrived at Ramsgate and on the next day proceeded to Brighton and on to Lewes to pay a visit of condolence to Doctor Hodgkin's brother. On July 29, 1866 he purchased a granite pillar for the tomb of his late friend and sent it on to Jaffa.

In 1875 Sir Moses was 92 years old; in spite of his advanced age, he made his seventh pilgrimage to the Holy Land. As one poet expressed it, Moses the son of Amron prayed to visit the Holy Land, but he saw it only from afar; but Moses, the son of Joseph, visited it seven times. He was delighted to step on to the soil of the Holy Land again, where he was given a royal reception. A detachment of soldiers drew up and presented arms, and as he recorded in his diary: "Deputations from the several congregations in Jerusalem, Jaffa, and Hebron bade me welcome and tendered their congratulations on my safe arrival. A large number of people almost overwhelmed me with their salutations. I entered a comfortable European carriage, which conveyed me first to the tomb of my much lamented friend, Dr. Hodgkin." Sir Moses ordered an iron fence to be constructed around the tomb.

His visit delighted him so much that he ordered a sculptor to prepare stones with the inscriptions of the verse, "For thy servants take pleasure in thy stones" (Psalm CII,15), to commemorate his visit.

He returned to London to receive a great welcome there, and he dedicated the rest of his life to champion the causes of his oppressed brethren.

This then is the story of two noble spirits — two philanthropists, both lovers of mankind in the fullest sense of the word. One was a dedicated and beloved physician who risked his life in undertaking a long journey to guard the health of his patient. He was a devout Quaker, not allowed to take an oath, but faithful to the oath of Hippocrates — for whom to heal and relieve suffering was its own reward. His patient, a man who amassed a fortune, lived a long and fruitful life, gave not only of his wealth but of himself. He endured the burning sun of Africa and the bitter cold of Russia in behalf of his less fortunate brothers. As it was said of Saul and Jonathan, "the lovely and the pleasant, — In their lives, even in their death they were not divided."*

*Second Samuel 1:23

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RUBELLA VACCINE RECOMMENDATIONS

A Report With Recommendations From The Council on Environ- mental and Public Health of the American Medical Association

BACKGROUND INFORMATION

While rubella (German Measles) is generally a mild disease when contracted during childhood, in postpubertal individuals, particularly females, there is considerably greater potential for harm. The illness is often more serious and prolonged and not infrequently has complications such as arthritis, arthralgia, and rarely, encephalitis. In addition, when rubella is present during pregnancy, especially during the first trimester of pregnancy, but also during the second trimester, from 15 per cent to 35 per cent of the infants may be born with what is now known as the congenital rubella syndrome. This includes partial or total loss of hearing or vision, major heart defects, mental retardation or combinations of these defects. In addition, there is a significantly increased proportion of miscarriages and stillbirths. Thus, serious transplacental damage is done by the virus.

The incidence of rubella shows a seasonal increase in the spring, generally during March, April, and May, in the United States, and these seasonal increases, in turn, have superimposed on them major national and international (increases) epidemics occurring at irregular intervals of from approximately six to nine years each. During the last forty years, there were three exceptionally high pandemic peaks that occurred about 1934 and 1935, 1942 and 1943, and 1964.

The primary goal of rubella vaccination is the prevention of the congenital rubella syndrome, with secondary goals of preventing rubella in postpubertal patients where disabilities are usually more serious than the relatively mild disease that it causes in young children.

VACCINE DEVELOPMENT

In June, 1969, the first rubella vaccine was licensed in the United States. This was an attenuated live virus, manufactured by Merck, Sharp and Dohme. It is made from the HPV-77 strain that has been grown on duck embryo cell culture. This vaccine was tested on over 13,000 susceptible children prior to licensing, with essentially no adverse reactions, although transient arthralgia or arthritis and rash did occasionally occur in older patients.

Smith, Kline and French are currently manufac-

turing an attenuated live virus rubella vaccine from a different strain (Cendehill). This is grown on rabbit kidney cell culture in Belgium and probably will be licensed in the near future in the United States. There is a similar expectation for an attenuated live virus vaccine that has been grown on dog-kidney cell culture by Phillips-Roxane. In addition, experimental work is progressing at the Wistar Institute in Philadelphia with a still different virus strain (WI-38), which is being grown on human embryo lung cell culture (Diploid cell). Thus, it is very likely that prior to the next seasonal peak, which would be anticipated in spring, 1970, millions of doses of at least three rubella vaccines will be available for use in the United States.

It is known that, following vaccination, virus particles are shed from the nasopharynx and uterine cervix. However, there have been no reports of cases of rubella as a consequence of the shedding.

VACCINE ADMINISTRATION

The currently licensed vaccine is administered by a single subcutaneous injection of reconstituted lyophilized vaccine. The label and insert instructions should be carefully read and followed. The following precautions are recommended.

Pregnant women must not be given the vaccine because the viremia that follows vaccination and lasts two to six weeks may permit the virus to pass the placental barrier and affect the growing fetus.

If vaccination of a nonpregnant woman in the childbearing age is anticipated, special safeguards should be taken. These might include testing the woman to make sure she is not already immune to rubella* and would include carefully weighing the advantages of vaccine administration against the disadvantages, including the possibility of her becoming pregnant, with the likelihood that the fetus might miscarry or develop the congenital rubella syndrome. If the physician believes that vaccination is desirable, he should prescribe a medically acceptable method for contraception and should explain the potential risk of becoming pregnant to the patient, and, preferably, obtain written, informed consent for the vaccination.

(Continued on Page 625)

OSTEOPATHS AND DOCTORS OF MEDICINE

Report of Special Ad Hoc Committee of the Society as Amended and Approved by the House of Delegates on October 1, 1969

At the April meeting of the House of Delegates it was voted that a committee to be comprised of the President of the Rhode Island Medical Society and the constituent presidents of the County Medical Societies to investigate and report back to the House at its September meeting on the question of osteopathic membership in medical societies, with possible recommendations.

The committee has met twice for lengthy discussions of the subject, and it submits its report and recommendations herewith.

I. BACKGROUND

For the past two years the officers of the Rhode Island Medical Society and the Officers of the Rhode Island Society of Osteopathic Physicians and Surgeons have met in conference to discuss mutual problems, and, hopefully, to bring about a closer union of the professions in the interest of the health of the people of Rhode Island. We have for several years invited osteopathic physicians to attend the annual scientific sessions of our medical society, and several of our hospitals have extended invitations to such physicians to attend conferences and lectures at their institutions.

As a step towards a better union we cooperated in drafting possible legislation that would provide for a single licensure board, and this proposal was presented to the House of Delegates which approved the recommendation but the Osteopathic Association did not. This past summer our efforts received a disturbing setback by the action of the Health Planning Council which publicly called for immediate action on issues with which both our professional groups have been making steady progress, without consulting with either of our societies. The correspondence involved in this action of the Health Planning Council is appended to this report.

Our interest is entirely that of the health of the individual.

We have always maintained as a stated goal that all who would practice the healing art shall be well educated and well trained in scientific medicine.

We are aware that in the past decade the osteopathic profession has made great strides in the improvement of its colleges, and this improvement has prompted changes in the policies of the Amer-

ican Medical Association and of the Joint Commission on Accreditation of Hospitals. The former ruled it ethical for members of the AMA to teach students of osteopathic medicine who seek to develop and improved their ability to provide better medical care, and the latter ruled that hospitals with osteopaths on their staff might be accredited at the state level on the basis of the same scientific principles as those adhered to by members of the AMA.

We recognize that graduate programs for osteopathic physicians are not available to the extent that they are for doctors of medicine, and we are aware that young osteopathic physicians now applying for AMA approved residency training, especially those who have had additional military medical experience, are well qualified.

The American Medical Association has urged the specialty boards to establish requirements leading to the examination and certification of osteopathic graduates who have completed AMA approved residency programs and have met all other requirements. To date we know of three specialty groups that have indicated they will initiate such programs — Obstetrics and Gynecology, Preventive Medicine, and Ophthalmology.

II. ISSUES INVOLVED

The action of the American Medical Association within the past year in urging the acceptance of osteopathic membership in state and county medical societies, and in amending its own bylaws to pave the way for such physicians to be AMA members, is one with many ramifications. Osteopathic licensure varies in our States. Relations between the two professions are not on such a high level of understanding and mutual respect in each state as we feel they are in Rhode Island.

We view our local problem as twofold:

- (1) active membership in a county medical society, the state medical society, and thereby the AMA;
- (2) staff privileges for osteopathic physicians in hospitals that have traditionally admitted only licensed doctors of medicine.

It should be clearly noted that the Rhode Island Medical Society has never altered its bylaws to

(Continued on next page)

membership to bar any *physician* from membership who has been qualified by his county medical society on the following basis:

- (1) That he is licensed to practice medicine *and* surgery in Rhode Island;
- (2) That he reside or practice in the territorial jurisdiction of the (county) society, except as the rules and regulations of this (Rhode Island Medical) Society may otherwise provide;
- (3) That he abide by the Code of Ethics of the American Medical Association; and
- (4) That he does not practice or claim to practice any school or system of sectarian medicine or healing.

These are the basic limitations placed upon the component county or district medical societies for the admission of active members.

It should be noted that in recent years osteopathic physicians licensed in Rhode Island have completed an internship qualifying them for licensure for medicine *and* surgery, whereas originally the privilege of performing major surgery called for a special examination and certification. The great majority of osteopathic physicians now practicing in this State have unlimited licensure.

RECOMMENDATION I

Your committee is of the opinion that no bylaw change is necessary for the admission of osteopathic physicians as members of the Rhode Island Medical Society since its members are all the eligible active members in good standing in the component societies. We recommend, however, that each component district society review its bylaws to determine that it meets the limitations set forth by the state medical society as noted above, and that on such basis it elect such applicants, doctors of medicine and osteopathic physicians, as it considers qualified for membership.

HOSPITAL STAFF MEMBERSHIP

The requirement that exists in the bylaws of the staff associations of many of our hospitals that the member have an affiliation with his local medical society is, in our opinion, an excellent rule in the interest of better medical practice. It is not a rule, however, that was promulgated by the Rhode Island Medical Society.

Of major concern to your committee is the vital importance to the people of this state that the objectives we seek in the amalgamation of doctors of medicine and osteopathic physicians on hospital staffs be solely in the interest of the patient.

RECOMMENDATION II

Your Committee recommends the adoption of the report and statement included therein as issued by the American Medical Association as follows:

During its 1968 Clinical Convention, the House

of Delegates of the AMA adopted a Board of Trustees' report setting forth the objectives of the amalgamation and a nine-point methodology.

The objectives of the plan are to:

- "(1) assure the provision of the best possible health care to the American people;
- (2) Make available to students and graduates in osteopathy, education of the same high standards as prevail in undergraduate, graduate and continuing educational programs in medicine; and
- (3) provide avenues whereby qualified osteopaths may be assimilated into the mainstream of medicine."

To supplement the suggested inclusion of osteopaths on hospital medical staffs, the AMA prepared a statement providing guidelines on osteopath eligibility. On April 29, AMA President Dwight L. Wilbur sent this supplementary statement together with the original policy statement to the administrator and the chief of the medical staff of every accredited U.S. hospital.

The complete text of the supplementary statement is as follows:

"Following adoption of the policy statement on osteopathy by the House of Delegates at the 1968 Clinical Convention, a number of requests for guidelines have been received from medical staff members in accredited hospitals. The policy statement 'suggests that accredited hospitals may accept qualified osteopaths for appointment to the medical staffs of hospitals.' The meaning of 'qualified osteopaths' for hospital medical staff membership purposes has raised some questions.

"The Board of Trustees believes that for the Doctor of Osteopathy to be qualified to be eligible for appointment to the medical staff of an accredited hospital he should (1) be legally licensed without limitation of practice in the jurisdiction within which he practices, (2) be willing to abide by the Principles of Medical Ethics of the American Medical Association and the bylaws of the hospital, (3) be practicing scientific medicine, and (4) be acceptable to the Credentials Committee of the Hospital. The following general guidelines may be of some assistance:

- "(1) All physicians who have unrestricted licenses to practice medicine and surgery and who are otherwise qualified deserve the privilege of practicing medicine as active medical staff members in hospitals, with a delineation of clinical privileges commensurate with their education, training, experience, personal character and capability. The appointment of duly licensed physicians to the medical staff of a hospital and the de-

finition of their practice privileges is a function and responsibility of the governing board of the hospital on the recommendation of the organized medical staff.

"(2) The policy of both the American Hospital Association and the Joint Commission on Accreditation of Hospitals permits hospitals having one or more osteopaths on the staff to be listed or apply for inspection for accreditation. The policy of the AHA was changed in 1959 to permit this and the present Requirements for Listing provide:

'3. Doctors of medicine, doctors of osteopathy, and doctors of dentistry may admit patients to hospitals registered by the American Hospital Association. (Patients admitted to the hospital by doctors of dentistry must have an admission history and physical examination done by a doctor of medicine or doctor of osteopathy on the staff of the hospital, and the doctor of medicine or osteopathy shall be responsible for the patient's medical care throughout his stay.)

'4. There shall be an organized medical staff (which may include doctors of osteopathy and dentistry) governed by bylaws adopted by said staff and approved by the governing board of the hospital.

'5. The hospital shall submit evidence of regular care of the patient of a doctor of medicine, doctor of osteopathy or doctor of dentistry and of general supervision of the clinical work by doctors of medicine.'

In 1960, the JCAH changed its policy to permit a hospital with joint M.D.-D.O. staff members to apply for inspection provided it is listed by the AHA and meets the other eligibility requirements.

"(3) The following language is suggested by the JCAH if the medical staff bylaws require amendment in order to extend eligibility for membership to qualified doctors of osteopathy:

'Members of the medical staff must be legally licensed as physicians and surgeons by the State of . . .'

"(4) The hospital medical staff should establish a system for evaluating individual applicants that is objective, impartial and fair, that is broad enough to recognize professional excellence and limited to safeguard patients. Insofar as practicable, individual applicants holding unrestricted licenses to practice medicine and surgery should be evaluated according to same criteria regardless of the school from which they graduated.

"(5) The organized medical staff of each hospital must determine in the case of each applicant whether his practice is based on the same scientific principles as doctors of medicine. The colleges of osteopathy have offered courses essentially the same curricula and used the same texts as medical schools since the 1950's.

"(6) Provisional or probationary privileges are recommended for all medical staff appointees for the first year, regardless of their education and experience."

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Rhode Island Medical Society

HUBERT HOLDSWORTH, M.D., *President*
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DONALD K. O'HANIAN, M.D., *President*
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Pawtucket Medical Association

NATHAN CHASET, M.D., *President*
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JOSEPH A. BLISS, M.D., *President*
Woonsocket District Medical Society

ERWIN SIEGMUND, M.D., *President*
Washington County Medical Society

RUBELLA VACCINE

(Continued from Page 622)

Because of the possibility of placental transfer of maternal immune bodies and the likelihood of these interfering with the development of immunity following vaccination, it is recommended that the vaccine not be administered to children under one year of age. The presence of other virus diseases or any febrile active generalized infection, as well as the use of corticosteroids, irradiation, alkylating agents or antimetabolites or other agents that would weaken the normal defense mechanisms of the individual are contraindications to the use of rubella vaccine. Other contraindications include concurrent use of a different live virus vaccine (e.g. measles or poliomyelitis). Administration of the rubella vaccine should then be deferred for at least four to six weeks.

For the Merck, Sharp and Dohme vaccine (Lyovac-Meruvax), epinephrine should be available for immediate use in case of an anaphylactoid reaction. The vaccine (which is grown on duck embryo cell culture) should not be given to individuals who are sensitive to duck or chicken eggs or feathers and, inasmuch as each dose of the reconstituted vaccine contains 25 micrograms of neomycin, individuals sensitive to this drug should not receive vaccine.

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Malpractice protection is serious business!

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GENERAL RECOMMENDATIONS

Inasmuch as the vaccine currently available in the United States is still relatively new (about 13,000 susceptible children had been observed for adverse reactions prior to licensing), it is possible that unanticipated adverse reactions, particularly in older patients, may occur with the general use of the vaccine. Therefore, it is recommended that any serious adverse reactions be reported promptly to the State Health Department and to the manufacturer who is responsible for reporting it to the Division of Biologic Standards of the National Institutes of Health.

While the frequency of naturally acquired immunity varies considerably with the age of the patient and the incidence and prevalence of the disease in a particular community, the National Communicable Disease Center estimates that about 15 per cent of the children under five years of age have become immune through naturally acquired disease, and that for the other age groups the respective natural immunity levels are approximately 35 per cent for the five to nine year olds, 60 per cent for the ten to fourteen year olds, 75 per cent for the fifteen to nineteen year olds, and 85 per cent to 90 per cent for those twenty to thirty-nine years old.

These figures vary from community to community, but may be used as a general guide for the desirability of performing screening tests for susceptibility prior to giving the vaccine. However, each person should be evaluated on an individual basis whenever possible.

For widespread use, in view of the lack of adverse reactions in small children and the fact that about two-thirds of the children under ten would be susceptible, all should receive the vaccine without doing a preliminary serological test for susceptibility. Children in kindergarten and the early grades of elementary school deserve initial priority for vaccination because they are commonly the major source of virus dissemination in the community. A history of rubella illness is usually not reliable enough to exclude children from immunization.

In view of the fact that circumstances will differ in various localities, it is recommended that group programs and public health programs should be launched on the basis of a coordinated plan, developed jointly by state and local public health agencies in cooperation with state and local medical and osteopathic associations.

*The only reliable evidence of immunity is a positive serological test. However, because of the variation among reagents and technical procedures, results of serological tests should be accepted only from laboratories of recognized competency that regularly perform these tests.

LENGTH OF STAY IN TEACHING HOSPITALS

The Commission on Professional and Hospital Activities of Ann Arbor, Michigan (CHPA) accumulates statistics on more than 1,200 hospitals in the United States. All Rhode Island hospitals participate in the Commission's Professional Activities Study (PAS).

In 1968 the Commission reported an analysis of some 2,000,000 hospital discharges during the first six months of 1966, 1.2 million from 209 teaching hospitals and 800,000 from 326 nonteaching hospitals. The analysis showed that patients stayed an average of one day longer in teaching hospitals than in nonteaching hospitals. Teaching hospitals were defined as those with internship or residency training programs. The study indicated that the longer stay was occasioned by: 1. the "teaching effect," which prolonged delivery of care to the extent of 0.7 days; and 2. the "patient mix" contributing 0.3 days to the stay since teaching hospitals treat more complicated cases.

Because of interest in the performance of "major teaching hospitals" as compared to others, further analysis of the data was carried out. For this phase of the analysis only hospitals discharging over 5,000 or more patients per year were evaluated. The teaching hospitals were separated into "major" and "other." For the purposes of this study hospitals offering any four of five residencies — medicine, obstetrics-gynecology, pathology, pediatrics, and surgery — were defined as "major teaching hospitals." There were 71 major teaching hospitals (549,000 discharges), 130 "other teach-

ing hospitals" (725,000 discharges), and 156 nonteaching hospitals (629,000 discharges).

The actual average stay in the three categories of hospitals was 8.7 days for major teaching hospitals, 7.5 days for other teaching hospitals, and 6.8 days for nonteaching hospitals.

In order to give weight to the more complicated cases allegedly admitted to major teaching institutions, the "expected" average stays were calculated on the basis of the patient mix in the three institutions. The "expected" stays, related to types and severity of cases, were found to be 8.0 days for major teaching hospitals, 7.6 days for other teaching hospitals, and 7.3 days for nonteaching hospitals. Stated another way, the major teaching hospitals had slightly more complicated cases than the other categories of hospitals.

After making adjustments for the patient mix, similar patients stayed 11 per cent longer in major teaching hospitals than in other teaching hospitals, and an unbelievable 18 per cent longer than in nonteaching hospitals (1.2 days). This increase of 1.2 days was attributed solely to the "teaching effect."

Whether or not the costly impact of the teaching effect is justifiable on the basis of educational needs is debatable. Academic leaders have a disposition casually to dismiss such analyses as being irrelevant to their needs. There is no question, however, that in the face of skyrocketing hospital costs they have a serious responsibility to the community to examine this increased length of stay and justify it in more objective terms.

MAGNETIC CRYSTALS

Since the introduction in 1948 by the Bell Telephone Laboratories of the first transistors intended to replace hitherto essential but space occupying vacuum tubes, progress toward miniaturization in electronics has been steady. In a May 1967 editorial titled "Chip of the Old Block: Revolution in Electronics" we reviewed the subsequent steps involving development of miniaturized diodes, capacitors, and resistors; printed circuits; and finally silicon chip circuits the size of a letter "o" on the typewriter and carrying as many as 50 circuits.

The Bell Telephone Laboratories have recently announced new developments in magnetic technology that could lead to another generation of computers and allied devices. Like the transistors the new devices depend on solid-state physical phe-

nomena. While transistors use the electrical characteristics of semi-conductor crystals (such as silicon or germanium) to amplify and switch signals, the new technology takes advantage of the magnetic alignment properties of crystals grown from mixtures of iron or lead oxides and rare-earth metals.

Thin slices of such magnetizable crystals can store as many as a million bits of information per square inch. Stacks of slices could hold millions of words and numbers in a volume not much larger than a candy box. In currently available equipment storing that much information for accessibility to computers takes units the size of closets, packed with precision machinery.

(Continued on next page)

Compactness is only one of the advantages of such devices made from magnetic materials. They have no moving parts to wear out and generate little heat. They operate on very low power and need very little wiring to interconnect them. Once the crystals are grown, manufacture will be much simpler than making semiconductor devices. The potential is a vast reduction in the cost of storing and handling data. Thus far no formal designation has been given to them. They are currently called "bubble" devices, because the process is based on generating tiny magnetized areas known as magnetic domains in the thin crystalline slices. The domains — a fraction of a thousandth of an inch in diameter — move across the slices under the influence of electrical currents in printed conductors on the surface, or in response to changes in the magnetic fields surrounding the unit. Under polarized light, the domains are visible under a microscope and look like tiny bubbles.

Guest Editorial

COMMUNICATION — KEY TO HEALTH?

Although the physical aspects of patient care would appear to be thorough, I am concerned with the "communication-gap" which appears to be increasing in the field of medicine. Communication means emotional comfort to the patient, and as it diminishes the therapeutic atmosphere may be extinguished. Principally, I am referring to the physician-nurse-patient relationship — or the restrictions which have been fostered by the "Too many patients — too little help" syndrome.

In the medical world we are becoming increasingly aware of the numerous disorders that may be psychosomatic in origin, and the unnecessary anxiety which some patients experience upon admission because of a lack of proper orientation. In this complex society, with tension at its highest level, no questions should pass unanswered. In fact, no thought should go unspoken.

Patient care is geared, however, to quick and

If the circuits are operated slowly, it is possible to watch the bits of data move through the storage and logic patterns that are printed on the surface of the crystal to guide them. The bubbles blend into a blur as the speed of data transfer increases toward the present maximum of 3-million bits per second. The growing of large crystals to accommodate large-capacity memories is still in the developmental phase. The Bell group envision a promising potential for dovetailing the new magnetic devices and recent advances in semiconductor circuitry. With integrated semiconductor circuitry in the high-speed units and magnetic circuitry in the storage and slower input and output units of computers, there should be a great opportunity for design innovation.

It appears that disk files and other costly computer components will eventually be replaced by less costly and more efficient miniaturized magnetic devices.

accurate diagnosis by an overtaxed staff who seldom have time to appreciate and understand the emotional problems that inevitably are associated with organic illness. Insufficient attention is given to the subjective feelings of the patient.

The time is rapidly approaching when we must decide whether interpersonal relationships are to be enhanced, or allowed to continue on the path towards "communicational sterility." As William Menninger, M.D. stated, "The most important single solution to our problems . . . is our potential capacity to care for each other, to love in the truest and broadest sense of that word." It is our duty to care — and if we care, a positive attitude toward proper communication will follow. This will unite the physician-nurse-patient relationship in a common goal towards health.

MARY LOU GILBERT, *President*

Student Nurses' Association of Rhode Island

INTER-INDUSTRY AEROSOL COMMITTEE

An Inter-Industry Committee on Aerosol Use has recently been formed for the purpose of educating against deliberate misuse of aerosol products. A number of well-known cosmetics, specialty, toilet, and proprietary preparations manufacturers are represented.

A sub-committee which will direct activities of an Aerosol Education Bureau was asked to proceed immediately with the development and distribution of informational materials for schools, youth groups, and media reaching young people,

as well as civic officials, public health and police departments, and the press.

There is a spreading practice among teen-agers of deliberately inhaling concentrated vapors of solvents, chemicals, glue, and aerosol products for the purpose of inducing intoxication. There is some professional opinion that dramatization of the practices or demonstration by photographs excites further practice by curious juveniles.

Nearly every common product is dangerous if misused. Employed properly and for intended pur-

poses, aerosols are believed to be relatively safe, and certainly a great convenience. There are more than 300 types of aerosol products currently available, including foods, cosmetics, medicines, paints, and many household items. Deliberate inhalation of concentrated amounts of aerosol vapors with the intent of intoxication has led to a number of deaths among young people between the ages of 11 and 22. The cause of death is not completely understood. Autopsy reports list such possible mechanisms as: freezing of the larynx, laryngeal spasm, heart arrest, asphyxiation, anoxia or acute lack of oxygen owing to the denial of air. Death comes without warning. There are no safeguards. There are no antidotes. The Aerosol Education Bureau has established a broad safety program to warn young people who may be embarking upon a dangerous course. The program enlists the help of public health and civic officials, teachers, parents, youth leaders, and youth itself in spreading knowledge of the dangers involved. Education and information on the inherent danger of the abuse of other substances have had deterrent effect. According to federal and local officials, the use of potent hallucinogens — LSD, mescaline, DMT and others — appears to be declining largely due to the widespread information of the long-term harmful effects of these drugs.

Adolescence is a difficult period in human development. Current sociological and psychological stresses contribute not only to an intensified need

to rebel, but also to retreat and to escape. The marked increase in teen-age use of narcotics is a grim evidence of this trend. In the Board of Education of the City of New York Curriculum Bulletin, "Prevention of Narcotics Addiction and Substance Abuses," factors listed as causes of teen-age addiction and chemical abuse are: broken homes, lack of parental control and vigilance, absence of church influence, idle curiosity, rebellion against authority, an attitude of "try anything once," and a desire to gain acceptance by a particular group.

Deliberate misuse of aerosol products is a part of what appears to be a "sniffing syndrome" among young people. In a paper titled "Solvent Sniffing," appearing in the April, 1967 issue of *Pediatrics*, Doctors Edward Press and Alan K. Done state:

"Various observations of the problem suggest that sniffing provides a chemical escape from reality which is more adaptable, and therefore more readily accepted, by young children than are such other intoxicating practices as alcohol ingestion or the use of narcotic drugs. The greater adaptability of the former resides primarily in inexpensiveness, ease of concealment, and ease of procurement for supposedly legitimate purposes."

This new program of the Inter-Industry Aerosol Committee to combat this unfortunate abuse represents enlightened self-interest and a high degree of responsibility in an important segment of American industry.

INTERFERON

Antibodies — and there now is a host of them — IgA, found in tissue; IgM, found in blood; IgG, found in the interstitial fluid — have a great deal to do with preventing infection, but are totally impotent against viral agents if not present before actual exposure to them. Since recovery from viral infection does in fact occur, some antiviral substance which eventually protects the organism from total destruction and initiates recovery must be present. Interferon (clearly derived from the verb "interfere") is such a substance. The blocking of a viral infection following a recent infection by another totally unrelated virus has been observed for the past quarter of a century. In 1957 Isaacs and Lindenmann showed that this was due to the activity of an extractable low molecular weight protein produced by virus infected cells, to which they gave the name "Interferon."

In the May 2, 1969 issue of *Science*, Maurice R. Hilleman in a summary article has given a working hypothesis for the action of Interferon. He follows the schema of Marcus and Salb regarding the interaction of virus and Interferon. According to

this concept, a virus attaches to a cell, and penetrates and uncoats the cell with the release of a single strand RNA from the virus. This strand replicates and, without separating, forms into a double strand of RNA. This in turn produces an alert release Interferon. In the second phase this released Interferon, which is freely diffusable from the producing cell to its neighbors, causes them to release Translation Inhibitory Protein (TIP). TIP attached to a ribosome* totally prevents the attachment to the ribosome of any foreign viral RNA messages, and thus prevents the replication of virus protein, or the virus itself. Viral infections in the last analysis may be viewed as the takeover of the protein-forming mechanism of a cell. The production of virus protein, to the exclusion of the cell's intrinsic protein, is disease in its most elemental sense. When the host cells are no longer required to subvert their activities to the replication of the infecting virus, recovery from viral infection occurs. Interferon is the initiating recovery agent.

Interferon is species specific, but not specific

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for a given virus — hence its extreme potential usefulness in preventing any viral infection. If Interferon could be produced in sufficiently large amounts for parenteral use, it would have wide clinical application. Obviously, human Interferon can only be produced by human cells. At the present time exogenous Interferon is too costly and available in amounts too small to have any practical significance, despite its tremendous potential.

Pending the development of practicable methods for using exogenous Interferon, auto-production of Interferon has been studied. Bacteria, parasites, viruses, polysaccharides, and endotoxins have to date been ineffective. The most promising stimulating agent produced in Hilleman's laboratories at the Merck Institute are double stranded — in contrast to single stranded — ribonucleic acids. All the RNA viruses require a double-stranded structure for replication. Since this form is not a normal component of cells, the author has postulated that it is this double-stranded structure which produces the alert or alarm reaction, which initiates a sequence of events that prevents the further spread of a virus in the organism, and results in eventual cure or recovery.

Finally it has been demonstrated that sequential

repeated immunizations with various attenuated live viruses produces effective levels of Interferon. Examples cited are live attenuated influenza virus taken by mouth, which will produce total resistance to all respiratory illnesses for approximately two weeks. Attenuated mumps vaccine, given parenterally, likewise protects against respiratory illnesses for two weeks. Live attenuated rubella virus given to young children frequently will produce a broad protection against all respiratory illnesses beginning about the thirteenth day and lasting close to three months.

Interferon produced by the administration of a double strand ribonucleic acid, the sequential administration of a series of attenuated viruses, or the eventual production of Interferon in large banks of tissue culture promise an entirely new approach to the control of viral infections — including cancer — quite apart from the well established role of the immunoglobulins and antibodies.

*One of the minute granules seen with the electron microscope, largely nucleic acid in composition, usually attached to the membranes of the endoplasmic reticulum of a cell, and presumably the site of protein synthesis. (Dorland)

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HOUSE OF DELEGATES of the RHODE ISLAND MEDICAL SOCIETY

Report of the Meeting Held on October 1, 1969

A regular meeting of the House of Delegates of the Rhode Island Medical Society was held at the Medical Library in Providence on Wednesday, October 1, 1969. The meeting was called to order by the Speaker of the House, Dr. John J. Cunningham, at 8:06 p.m.

The following members of the House were in attendance: Doctors John J. Cunningham; John C. Ham; Francis D. Lamb; Joseph E. Wittig; Charles S. Dotterer; Frederick Peirce, Jr.; Robert Hayes; F. Bruno Agnelli; James A. McGrath; Stanley D. Simon; Richard P. Sexton; Stephen J. Hoye; John P. Grady; John T. Barrett; Joseph E. Caruolo; Nathan Chaset; Martin E. Felder; Herber F. Hager; Milton W. Hamolsky; Thomas F. Head; Joseph J. Lambiase; Robert V. Lewis; Vincent I. MacAndrew; Peter L. Mathieu, Jr.; William A. McDonnell; Frank Merlino; James B. Moran; Gustavo A. Motta; Raul Nodarse; Ralph F. Pike; Carl S. Sawyer; William R. Thompson; Banice M. Webber; Seebert J. Goldowsky; and Edmund T. Hackman and Nathan Sonkin.

Also present were Dr. Francis B. Sargent, chairman of the Mediation Committee, Dr. Wilson Utter, chairman of the Child-School Health Committee, and by invitation Dr. Denham Scott of the state department of health. Also present were Messrs. John E. Farrell, executive secretary, and Edward J. Lynch, assistant executive secretary.

Members of the House absent were: Doctors Daniel J. Dorman, Jr.; Edward F. Asprinio; John M. Vesey; Paul J. M. Healey; Alexander A. Jaworski; Alton M. Paull; Josepr L. C. Ruisi; Francis L. Scarpaci; Leonard S. Staudinger; F. Edward Yazbak; J. Robert Bowen; Bertram H. Buxton, Jr.; Herbert Ebner; Henry B. Fletcher; Warren W. Francis; Frank D. Fratantuono; Alvin G. Gendreau; Irving T. Gilson; Thomas R. Littleton; William J. MacDonald; Edwin B. O'Reilly; John E. Cannon; and Arnold Porter.

Report of the Secretary

Dr. Stephen J. Hoye, secretary, read his report, copy of which was included in the handbook for the meeting. Doctor Cunningham discussed item 4, regarding AMPAC, and he urged the delegates to bring the request to their district societies to conduct a meeting on political action as it relates to the medical profession. Doctor Goldowsky explained the reason for proposed bylaws for the

Council of the New England Medical Societies of which he is the president.

The House approved of the request to support the United States Pharmacopeial Convention in its effort to secure the issuance of a commemorative postal stamp on the occasion of its 150th anniversary.

Action: A motion was made, seconded and voted that the report of the Secretary, as submitted, be approved and placed on record.

Report of the Treasurer

Dr. John P. Grady, treasurer, reviewed his report which was included in the handbook of the meeting, and which provided detailed information on the finances of the Society, as well as the proposed budget for 1970.

Action: A motion was made, seconded and voted that the report of the Treasurer be approved, and the proposed budget for 1970 be accepted.

Report of the Trustees of the Medical Library Building

Dr. Charles S. Dotterer, chairman of the board of trustees of the medical library building, noted that his report was included in the handbook of the meeting.

Doctor Goldowsky moved that the House request the board of trustees to investigate the possibility of an air conditioned space in the library within which the rare books might be stored. The motion was seconded and passed.

Action: A motion was made, seconded and voted that the report of the chairman of the board or trustees of the medical library be approved and placed on file.

Council Recommendations

On separate votes the following recommendations of the Council were adopted:

1. That Dr. David Freedman be elected for a 3-year term as a trustee of the Benevolence Fund, to serve until 1972.
2. That the annual dues for 1970 be \$80 for active members in practice more than one year, and \$40 for members in their first year of practice.

Washington County Resolution

The Secretary read a resolution from the Washington County Medical Society stating that the Society would like to be placed on record as being

(Continued on next page)

in favor of placing the mental health program (of the state) under the department of health rather than under the department of social welfare.

The resolution was received and placed on record.

Osteopathic Issues

Dr. Stanley D. Simon reviewed the detailed report on osteopathic issues as presented in the handbook for the meeting. The issue was discussed at length by members of the House.

Action: A motion was made, seconded, and passed on a division vote (18 to 6) that the House accept the report and recommendations of its special Ad Hoc Committee on osteopathic membership, as submitted to the House, with the deletion of the second paragraph on page 5 of the section relating to hospital staff membership.

Child-School Health Committee

Dr. Wilson Utter, chairman of the Child-School Health Committee, gave an oral report for his committee. He stated that a conference had been held with the state department of health officials regarding the best possible method of immunizing school children with the rubella vaccine. He stated that the program that seemed best was one by which all elementary school children would be immunized over a three or four month period, starting in October, 1969. He asked permission of the House to have the Society cooperate with the state health department, which would furnish the vaccine, in the mass immunization plan, and he also asked for permission to poll the membership of the Society to seek physician volunteers who would give one or two mornings during the next four months to assist in the immunization of children at the schools.

The project was discussed by the House.

Action: A motion was made, seconded and voted that the House approve of the Society co-sponsoring the rubella vaccine program as proposed by the Child-School Health committee, and that the members of the Society be polled to volunteer in the program.

Mediation Committee

Doctor Cunningham noted that Doctor Sargent, chairman of the Mediation committee had to leave the meeting. His report was included in the handbook, however.

Action: A motion was made, seconded and voted that the report of the Mediation committee be received and placed on file, and that the Appendix A of the report be referred to legal counsel for possible implementation.

Highway Safety

Doctor Caruolo stated he had no additions to his report as submitted in the handbook.

Action: A motion was made, seconded and voted that the report of the highway safety committee be approved.

Scientific Work and Annual Meeting

Dr. Milton Hamolsky, chairman of the committee on Scientific Work and Annual Meeting gave an oral report. He stated the meeting would be a one day session in 1970, to be held on Saturday, April 4. A socio-economic program will be held at the medical library in the afternoon, and a reception and dinner at the Holiday Inn in Providence in the evening. He stated that Dr. David Rutstein of Boston had accepted the invitation to be the Chapin orator.

Action: A motion was made, seconded and voted to approve of the report of the scientific work and annual meeting committee.

Social Welfare

Dr. Peter Mathieu reviewed the report of the committee on social welfare as presented in the handbook. He discussed the reasons for the proposal for peer consultation review committees to be named by the specialty societies in the state.

Action: A motion was made, seconded and voted that the report of the committee on social welfare be approved.

Committee Reports

The Speaker noted that several reports were included in the handbook that offered information for the House, but did not include any special recommendations for action by the House. He asked for approval of these reports.

Action: A motion was made, seconded and voted that the reports of the committees on diabetes, nursing, medical aspects of sports, perinatal mortality, physicians service, alcoholism, and the report of the trustees of the Benevolence Fund, be approved.

Resolution on Hospital Costs

The continuous rise in hospital costs was discussed by members of the House. The following resolution was submitted:

The House of Delegates of the Rhode Island Medical Society, as the policy-making body of this organization of doctors of medicine in this state, expresses publicly its great concern over the constant rising cost of hospital care in Rhode Island and it urges that the hospitals, individually and collectively, seek effective ways to halt this spiralling cost.

The House is fully aware of the effect of inflation, and of the overall cost of health care throughout the nation. But it likewise believes that every possible avenue of study and research in the problem of controlling costs should be undertaken in the interest of patients.

Pursuant to this objective it suggests that hos-

(Continued on Page 633)



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Non-nursing mothers may begin Ovulen-21 immediately after delivery, on the day of departure from the hospital or at the first postpartum visit, as desired. It is recommended that nursing mothers begin Ovulen-21 four weeks after delivery.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Indication—Oral contraception.

Contraindications—Thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia, undiagnosed abnormal genital bleeding.

Warnings—Watch for the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, retinal thrombosis); if present or suspected discontinue the drug immediately.

British studies reported in April 1968^{1,2} estimate there is a seven- to tenfold increase in mortality and morbidity due to thromboembolic diseases in women taking oral contraceptives. In these controlled retrospective studies, involving 36 reported deaths and 58 hospitalizations due to "idiopathic" thromboembolism, statistical evaluation indicated that the differences observed between users and non-users were highly significant. The conclusions reached in the studies are summarized in the table below:

Comparison of Mortality and Hospitalization Rates Due to Thromboembolic Disease in Users and Non-Users of Oral Contraceptives in Britain.

Category	Mortality Rates		Hospitalization Rates (Morbidity)
	Age 20-34	Age 35-44	Age 20-44
Users of Oral Contraceptives	1.5/100,000	3.9/100,000	47/100,000
Non-Users	0.2/100,000	0.5/100,000	5/100,000

No comparable studies are yet available in the United States. The British data, especially as they indicate the magnitude of the increased risk to the individual patient, cannot be applied directly to women in other countries in which the incidences of spontaneously occurring thromboembolic disease may differ.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or sudden onset of proptosis, diplopia or migraine. Withdraw medication if papilledema or retinal vascular lesions are found.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that pregnancy be ruled out for any patient who has missed two consecutive periods before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the first missed period.

A small fraction of the hormone agents in oral con-

traceptives has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Precautions—Pretreatment physical examination should include special reference to the breasts and pelvic organs, and a Papanicolaou smear.

Endocrine and possibly liver function tests may be affected by Ovulen. Therefore, it is recommended that such tests if abnormal be repeated after the drug has been withdrawn for two months.

Pre-existing uterine fibromyomas may increase in size under the influence of progestogen-estrogen preparations.

Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation.

In breakthrough bleeding, and all irregular vaginal bleeding, consider nonfunctional causes. Adequate diagnostic measures are indicated in undiagnosed vaginal bleeding.

Carefully observe patients with a history of psychic depression and discontinue the drug if severe depression recurs.

Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study.

A decrease in glucose tolerance has occurred in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be observed carefully while receiving Ovulen.

Because of the effects of estrogens on epiphyseal closure Ovulen should be used judiciously in young patients in whom bone growth is not complete.

The age of the patient constitutes no absolute limiting factor, although Ovulen therapy may mask the onset of the climacteric.

The pathologist should be informed of Ovulen therapy when relevant specimens are submitted.

Adverse Reactions—A statistically significant association has been shown between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: cerebrovascular accidents, neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement, secretion), change in weight, changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, allergic rash, rise in blood pressure in susceptible individuals, mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme and nodosum, hemorrhagic eruption, itching. The following laboratory results may be altered by oral contraceptives: hepatic function: increased sulfobromophthalein and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T³ uptake values; metyrapone test; pregnanediol determination.

References: 1. Inman, W. H. W., and Vessey, M. P.: Brit. Med. J. 2:193-199 (April 27) 1968. 2. Vessey, M. P., and Dalli, R.: Brit. Med. J. 2:199-205 (April 27) 1968.

Before prescribing see complete prescribing information.



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Syracuse, New York 13201



HOUSE OF DELEGATES

(Continued from Page 632)

pitals consider increasing utilization of modern management techniques in hospital operations, and that they also view favorably reimbursement incentives by third party insurers to encourage cost economies.

The Rhode Island Medical Society offers its wholehearted cooperation toward the effective application of these concepts.

Action: A motion was made, seconded and unanimously voted that the resolution be approved and made public.

Adjournment

The meeting was adjourned at 10:50 p.m.

STEPHEN J. HOYE, M.D.

Secretary

REPORT OF THE SECRETARY

At a recent meeting the Council of the Society took the following actions:

1. It approved the plan for the annual meeting to be held on Saturday, April 4, 1970, starting with a buffet luncheon at the Medical Library at noon, then a scientific session on the subject of "Delivery of Medical Care in the '70ties", and a social hour and dinner at the Holiday Inn in Providence in the evening. It also approved of the proposal that the Society finance the Saturday buffet luncheon at the library, and the cocktail party prior to the dinner.

2. It voted full support to the Officers and the Committee on Public Laws in opposing chiropractic care for Rhode Island citizens.

3. It approved the appointment of Dr. Jeanette E. Vidal of West Warwick as Trustee-at-Large for 1970 on the board of trustees of the Medical Library Building.

4. It endorsed AMPAC, and voted to urge that each component society devote one meeting in the year to the matter of political action as it relates to medicine, and that Mr. Edward Donelan, AMPAC and AMA Field Secretary in New England, be considered as a possible speaker at such meetings.

5. It approved of the transfer of \$4,000 from the special savings account to the general account as partial reimbursement for the staff services rendered in handling the group Blue Cross-Physician Service account.

6. It approved of the use by the Library Committee for library improvements of \$800 in funds accruing from the annual book sale.

7. It approved of the proposed budget for 1970.

8. It approved of the report of the board of trustees of the Medical Library Building, and it voted that the Society take appropriate measures

to provide reasonable security for employees remaining in the building throughout the night.

9. It endorsed a proposal of the AMA Council on Environmental and Public Health for a national conference, and it suggested that the subject of air, water and waste disposal pollution be a major topic of discussion.

10. It approved co-sponsorship by the Society of a workshop to be held in Providence by the Commission on Professional and Hospital Activities of the national Blue Cross.

11. It voted that the Society establish a committee on Allied Professions and Services.

12. It endorsed in principle a seminar on the "Medical Aspects of Dyslexia and Associated Learning Disabilities" to be held under joint sponsorship of the R.I. Ophthalmological Society and other agencies.

13. It approved of the listing of the Society as advisor in the preparation of the Diet Guide which is being revised for new publication and distribution.

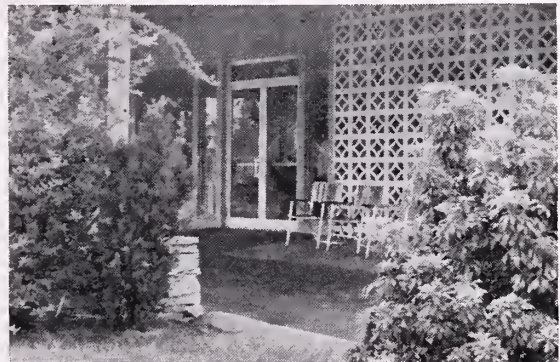
14. It approved of suggested bylaws amendments to be submitted to the Council of the New England State Medical Societies.

15. It expressed concern regarding the subject of drug use and abuse, and it urged that the Com-

(Continued on next page)

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mittee on Mental Health give consideration to statement of clarification for both the profession and the public generally.

STEPHEN J. HOYE, M.D.
Secretary

REPORT OF THE TREASURER

1968 Audit

Ward, Fisher & Company completed their audit of the Society's accounts, and they reported to me on July 1 that their examination of the financial records of the Rhode Island Medical Society was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as were considered necessary in the circumstances. In the opinion of the auditors the statements of cash receipts and disbursements present fairly the transactions of the Society and the Rhode Island Medical Journal for the year ended December 31, 1968.

Medical Library Grant

The National Library of Medicine, through its Grants and Contracts Management Officer, notified the Society this summer that a continuance of the Medical Library Resource Grant first made a year ago has been approved in the amount of \$4,069. This money will be utilized mainly to continue the microfilming of journals held by the Library.

Savings Account Transfer

The Society, through the executive office, handles all the work of the group account for Blue Cross and Physicians Service for the membership. This work entails all billings, deposits, maintenance of records, and correspondence throughout the year. At this time the 1968-69 account is closed, and we have a balance, from interest on the account of \$4,684. With the approval of the Council \$4,000 is transferred from this account to partially reimburse the Society for staff services in handling the work.

Disaster Conference

The conference for rescue workers sponsored by the Committee on Disaster, and held at Roger Williams General Hospital on March 9, was financed through grants from the Federal Department of Health, Education and Welfare, in the amount of \$750, and by the Medical All Purpose Fund of the Society held by the Rhode Island Foundation, in the amount of \$435. These grants covered the total cost of the conference.

Carlotta Williams Bequest

The final payment of the bequest from the Estate of the late Carlotta Williams was made this

year, and the \$4,169.83 received was deposited in the general account of the Society, to be utilized, in accordance with the bequest, for the "improvement of the Library." The board of trustees of the Library has authorized improvements to the building on the basis of this bequest.

Agency Account

A review of our Pooled Fund of investments handled by the Trust Department of the Industrial National Bank, priced as of April 30, 1969, was submitted to me by the bank, which commented as follows:

"Although the summary shows 68.2 per cent in common stocks, it seems that the three lots of preferred stock which are convertible might also be carried in this classification; this would raise the per cent in common stocks to 78.7 per cent. If the Caleb Fiske Fund is included in the overall picture, the equity position would drop to about 74 per cent.

We told you in January we feel this market can decline. Despite the run up which it has had in the past quarter, we have not reversed our position. The hopes of peace in Viet Nam and its psychological impact is reflected in current stock prices. Interest rates have continued to rise and the bond portion of the Pooled Fund and the Caleb Fiske Fund are both down from previous levels. We expect the efforts of the Administration to slow down inflation will be reflected in an easing of money rates (at least in a modest degree) and with this decline in the expansion rate of business which is likely to be reflected in lower stock prices.

We feel that the holdings in this account are satisfactory and we are suggesting no changes in the assets. The Treasury 5¼'s and the C I T Financial 4¼'s both provide money fairly close to par should we want it in the future."

Budget for 1970

The bylaws stipulate that at this time I submit a proposed budget for the operation of the Society in 1970. Therefore I have prepared one based on 1968 operating costs, and on current operating expenses.

JOHN P. GRADY, M.D.
Treasurer

TRUSTEES OF THE MEDICAL LIBRARY

Early in the summer the Society received the final payment of the balance of the bequest made by the late Mrs. Carlotta Williams, widow of the late Dr. Pearl Williams, for improvement of the Library building. This payment was for \$4,169.83.

The Trustees approved of improvements to be carried out during the summer months to provide

(Continued on Page 636)

Dulcolax®...so predictable you can almost set patients by it.

Dulcolax works so effectively that the time of bowel evacuation can often be predicted.

Dulcolax tablets taken at night will usually result in a convenient bowel movement the following morning. Dulcolax suppositories generally work within 15 minutes to an hour.

Dulcolax may be given to the aged, pregnant or nursing women, and children. It may be particularly helpful in conditions in which straining should be avoided. The drug, however, is contraindicated in the acute surgical abdomen.

Dulcolax® bisacodyl



HOUSE OF DELEGATES

(Continued from Page 634)

storm windows for the Davenport Room and the Medical Bureau in the basement of the building, for draperies for the same area, with the Medical Bureau sharing the cost, new chairs for the Davenport Room where many committee meetings are held during the year, and for reupholstering the seats in the auditorium and for the painting of the seat frames. This work has been carried out and the improvement to the Library is notable.

We have asked the architect to study and recommend new doors for the main entrance, and we are hopeful that this needed improvement can be made during the coming months.

A roof leak has been repaired, and water damage to a portion of the auditorium ceiling has necessitated a repainting. To protect the north end of the property a 32 foot wire fence has been added from Francis Street into our property.

On Labor Day an intruder attempted forced entry into the Medical Bureau through a basement window. He was arrested and charged by the police with malicious mischief. The incident has been most disturbing to the Bureau staff and the Librarian, and the Providence Medical Association is considering better security measures for the basement area which I am sure will have the complete approval of the Board of Trustees of the Library. Our building is somewhat isolated during evening hours, and it will be necessary that every precaution be taken for the safety of employees working late night hours.

CHARLES S. DOTTERER, M.D.
Chairman

MEDIATION COMMITTEE

We are glad to report no new malpractice actions. There have been the usual lists of complaints and grievances, invariably about doctors' fees.

In our survey of the area of Professional Liability Insurance, we find that the subject is receiving close attention from the A.M.A. and the constituent societies. The moving reason for this has been the steady increase in insurance rates and several instances of cancellation by the insurance companies.

The increase in premiums is running ahead of the rate of inflation. Despite this, the payout by the companies, on a nationwide basis is greater than the premium income. Furthermore, the payout in this type of insurance is unpredictable.

For various reasons Medical Societies have rejected proposals for carrying their own insurance. Unfavorable publicity is one of the reasons for rejection. Insurance laws in many states add to the difficulty.

In Rhode Island we have fared very well. The procedure which has been in use here for many years is equal or better than the much touted "Oregon Group Insurance Plan." At present, we see no reason for a change. However, the situation should be closely watched, especially in the area of cancellations.

FRANCIS B. SARGENT, M.D.
Chairman

HIGHWAY SAFETY COMMITTEE

In July the chairman of this committee attended an all day session of the Breathalyzer Operators Training Course at the University of Rhode Island and was favorably impressed. As a result a news release was issued in which we stated that the aim of the Rhode Island Department of Health's Chemical Test Training Program is to prove that motor vehicle operators suspected of drunkenness were not always legally inebriated or, for that matter, unfit to drive, but that the purpose of the breath testing instruments were not only to catch the drunken driver but also to clear innocent motor vehicle operators of any suspicion of drunkenness.

We are in communication with the Registrar of Motor Vehicles and are attempting to have distributed with each new and renewed license a chart which would emphasize the amount of alcohol a person of given weight could ingest and still safely drive.

We discussed the proposal with Mr. Charles W. Shields, Jr., Executive Director of the Governor's Council on Highway Safety, and members of the State Department of Education to have included in the curriculum of drivers training courses presently offered in the high schools an hour or two which would be devoted to "drugs and alcohol and their effect on safe driving." In spite of his many urgent preoccupations we have been promised that the Commissioner will help. We have learned that the drivers' training program is a joint responsibility shared by two very competent and well meaning agencies, but changes, even if for the better, are brought about with great difficulty.

Questionnaires were sent out to the chiefs of the 39 Police Departments in the state inquiring into the experience with the breathalyzer apparatus. Five replies were received. Two chiefs informed us that they do not have any breathalyzers; however, Mr. Shields tells us that Federal money is now available for the purchase of machines and for the training of operators. We hope this deficiency will soon be corrected. One chief reports a 95 per cent success rate in prosecutions when the breathalyzer evidence is used. One chief is discouraged over the technicalities of the law and the leniency of the judiciary. Another chief

(Continued on Page 637)

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Contraindications: Porphyria or sensitivity to barbiturates.

Precautions: Exercise caution in moderate to severe hepatic disease. Elderly or debilitated patients may react with marked excitement or depression.

Adverse Reactions: Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and systemic disturbances are seldom seen.

Warning: May be habit forming.

Usual Adult Dosage: As a daytime sedative, 5 mg. ($\frac{1}{4}$ gr.) to 30 mg. ($\frac{1}{2}$ gr.) t.i.d. or q.i.d.

Available for daytime sedation: Tablets, 15 mg. ($\frac{1}{4}$ gr.), 5 mg. ($\frac{1}{8}$ gr.); Elixir, 30 mg. per 5 cc. (alcohol 7%).

BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 5 mg. ($\frac{1}{8}$ gr.), 30 mg. ($\frac{1}{2}$ gr.).

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Fire victim. Examination reveals second degree burn of lower leg. To combat shock, restore circulatory volume and replace protein loss, plasma is administered. Local pressure dressing applied. Limb elevated to limit the flow of lymph. About 36 hours after admission the patient develops an elevated temperature and complains of pain at the site of the lesion. Dressing removed. A suppurating slough area has developed over part of the burn. A swab specimen is taken for culture and the slough area is debrided. Antibacterial treatment is begun with Terramycin I.M. Days later, recovery is progressing, and the laboratory report shows a mixed infection with a predominance of susceptible coliform bacteria, confirming the therapeutic choice. Terramycin therapy is continued until all signs of infection disappear.

Experience has shown that Terramycin offers special advantages in treating bacterial infections complicating burns, when strains of causative organisms are susceptible. Broad-spectrum antibacterial coverage. Activity unaffected by penicillinase. Rapidly achieved therapeutic blood levels. Proven tissue toleration.

Terramycin I.M. is the only preconstituted broad-spectrum antibiotic designed specifically for intramuscular use. Requires no refrigeration. Remains stable for at least two years. Available for immediate use in Isoject,[®] a disposable injection unit. In difficult as well as routine cases, when tests reveal susceptible organisms, consider Terramycin. One of the world's most widely used broad-spectrums.

Terramycin[®] I.M. (oxytetracycline)



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Contraindicated: In individuals hypersensitive to any of the components of this drug.

Warnings: If renal impairment exists, even usual doses may lead to excessive systemic accumulation and possible liver toxicity. In such patients, lower than usual doses are indicated and for prolonged therapy oxytetracycline serum level determinations may be advisable.

Terramycin may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Use of oxytetracycline during the last trimester of pregnancy, neonatal period and early childhood may cause discoloration of teeth. This effect occurs mostly during long-term use of the drug, but it has also been observed in usual short-treatment courses.

During treatment with tetracyclines, individuals susceptible to photodynamic reactions should avoid direct sunlight. Discontinue therapy at first evidence of skin discomfort.

Note: With oxytetracycline, phototoxicity is not believed to occur and photoallergy is very rare.

Precautions: Use of broad-spectrum antibiotics occasionally may result in overgrowth of nonsusceptible organisms. Where such infections occur, discontinue oxytetracycline and institute specific therapy.

As with all intramuscular preparations, Terramycin Intramuscular Solution should be injected well within the body of a relatively large muscle. **Adults:** The preferred sites are the upper outer quadrant of the buttock (i.e., gluteus maximus), or the mid-lateral thigh. **Children:** It is recommended that intramuscular injections be given preferably in the mid-lateral muscles of the thigh. In infants and small children the periphery of the upper outer quadrant of the gluteal region should be used only when necessary, such as in burn patients, in order to minimize the possibility of damage to the sciatic nerve.

The deltoid area should be used only if well developed such as in certain adults and older children, and then only with caution to avoid radial nerve injury. Intramuscular injections should not be made into the lower and mid-thirds of the upper arm. As with all intramuscular injections, aspiration is necessary to help avoid inadvertent injection into a blood vessel.

Increased intracranial pressure with bulging fontanelles has been observed occasionally in infants receiving therapeutic doses of the drug, but such signs and symptoms have disappeared rapidly on cessation of treatment with no sequelae.

Adverse Reactions: Subcutaneous and fat-layer injection may produce mild pain and induration which may be relieved by an ice pack. Very mild gastrointestinal disturbances, not requiring discontinuance of the drug, may occur occasionally. Allergic reactions, including anaphylaxis, rarely have been observed.

Dosage: Adult: The optimal dosage varies, depending on the type and severity of infection. Unless otherwise specified, a dose of 100 mg. every 8 to 12 hours, or a single daily dose of 250 mg. should be adequate for the treatment of most mild or moderately severe infections. In severe infections, 100 mg. every 6 to 8 hours, or 250 mg. every 12 hours may be necessary.

Serum levels obtained by the recommended dosages are comparable to those provided by the oral dosage of 1 to 2 Gm. daily in adults. Antibiotic therapy should be continued for at least 24 to 48 hours after all symptoms and fever have subsided.

In certain diseases specific courses of therapy may be recommended as a general guide. In primary and secondary syphilis for example, the daily administration of 2 Gm. oxytetracycline, orally, in divided doses for two weeks has given good results. In cases of gonococcal infection two intramuscular injections of 250 mg. each, or one intramuscular injection of 250 mg. combined with one gram given orally as a single dose, will usually suffice, but repetition of this therapy will be required in an occasional case.

In the treatment of hemolytic streptococcal infections, therapy should continue for at least 10 days to prevent development of rheumatic fever or glomerulonephritis. In the treatment of staphylococcal infections indicated surgical procedures should be carried out in all cases.

Pediatric: A dosage of 3 mg./lb./day in two doses has been found satisfactory in the treatment of most mild to moderately severe infections. For more severe infections, higher dosages may be indicated and should be adjusted accordingly.

Terramycin Intramuscular Solution provides maximum absorption and patient toleration with minimal local irritation.

Supply: Terramycin (oxytetracycline) Intramuscular Solution: available in single dose, prescored glass ampules containing 100 or 250 mg. oxytetracycline/2 cc., Isoject[®] syringes containing 100 or 250 mg. oxytetracycline/2 cc. and 10 cc. multiple dose vials containing 50 mg. oxytetracycline/cc.

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this ulcer did not heal...until its surface was cleared of dead tissue and debris



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EIGHTEEN DAYS LATER

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to facilitate healing
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By helping to remove dead tissue and debris from the ulcer's surface, ELASE Ointment creates a better environment for the elimination of infection, for healthy granulation...for healing. Its lytic enzymes effectively break down DNA in dead leukocytes and other debris...the fibrin in blood clots, serum, and purulent exudates...and the denatured proteins in necrotic tissue. Protein elements of *living* tissue are relatively unaffected. ELASE Ointment is indicated in stasis ulcers and in other infected or inflamed ulcers caused by circulatory disturbances. In cases requiring skin grafting, it is used preoperatively for debridement. For ambulatory patients debridement with ELASE Ointment is a convenient therapy and a regimen likely to be followed. *Precautions:* Observe usual precautions against allergic reactions, particularly in persons with a history of sensitivity to materials of bovine origin or to mercury compounds. *Adverse Reactions:* Side effects attributable to the enzymes have not been a problem at the dose and for the indications recommended. *Discussion:* Successful use of enzymatic debridement depends on several factors: (1) dense, dry eschar, if present, should be removed surgically before enzymatic debridement is attempted; (2) the enzyme must be in constant contact with the substrate; (3) accumulated necrotic debris must be periodically removed; (4) the enzyme must be replenished at least once daily; and (5) secondary closure or skin grafting must be employed as soon as possible after optimal debridement has been attained. It is further essential that wound-dressing techniques be performed carefully under aseptic conditions and that appropriate systemically acting antibiotics be administered concomitantly if, in the opinion of the physician, they are indicated. *Available:* ELASE Ointment is supplied in 30-Gm. tubes containing 30 units (Loomis) of fibrinolysin and 20,000 units of desoxyribonuclease with 0.12 mg. thimerosal (mercury derivative); and in 10-Gm. tubes containing 10 units of fibrinolysin and 6,666 units of desoxyribonuclease with 0.04 mg. thimerosal. ELASE Ointment has a special base of liquid petrolatum and polyethylene; contains sodium chloride and sucrose used during manufacture; is stable at room temperature through the expiration date stated on the package.

Parke, Davis & Company, Detroit, Michigan 48232

PARKE-DAVIS

HOUSE OF DELEGATES

(Continued from Page 636)

sent the following chart which shows the growing magnitude of the problem in his area and what is being done with it.

Year	Charged	Guilty as Charged	Guilty Lesser Offense	Acquit.	Appeal.
1962	0	0	0	0	0
1963	1	0	0	1	0
1964	1	0	1	0	0
1965	0	0	0	0	0
1966	12	9	1	1	1
1967	15	12	3	0	0
1968	24	20	1	0	3

The Highway Safety Committee sent out questionnaires to all the hospital directors of the state asking for their comments on whether or not they would like to see hospital personnel required to perform blood alcohol levels or administer breathalyzer tests to be granted immunity by legislation.

The replies were all interpreted as favorably disposed to the idea but were quick to point out all the technicalities involved with special reference to the principle of protection against self incrimination as embodied in our legal system. One director made the excellent suggestion that such legislation incorporate provisions for making acceptable in court copies of the results of such tests pointing out the shortage of technical hospital personnel and how time consumed in court as witnesses would aggravate the shortage.

Members of the Governor's Council on Highway Safety also received notice of the questionnaires. A State Senator has expressed interest in our proposal and has led us to believe he would be happy to sponsor such legislation.

JOSEPH E. CARUOLO, M.D.
Chairman

ADVISORY COMMITTEE ON SOCIAL WELFARE

Total expenses for the health services by the Department of Social Welfare for the last fiscal year have been reported to amount to \$28.5 million. Broken down these costs were: \$15.4 million to the hospitals; \$3.5 million to drugs; \$1.5 million to physician office visits and 0.8 million dollars to physician inpatient hospital charges; 0.779 million of dollars to dental charges; \$4 million to nursing home care and 0.213 million of dollars for SMI, old age buy-in-premiums.

On the basis of these reported figures approximately 7 per cent of funds spent by the Department of Social Welfare for health services during the last fiscal year was paid out to physicians. Approximately 70 per cent of all hospital outpatient

department reimbursements was allotted to the largest hospital in Rhode Island. The largest medical group to receive payment from the Social Welfare Department was a Radiologists' Group which received \$33,000. The second largest medical vendor was a general practitioner who received \$30,00. The fiftieth largest vendor was reimbursed \$7,780.

Since July, 1967 the State of Rhode Island has reimbursed the fixed installations in the State that provide health services in the community at maximum cost to the patient. One fixed installation in its admission policy states, "*Fees for patients are based on ability to pay. Public agencies will be expected to pay the full cost of care.*"

It seems incongruous to expect a physician in his office to accept \$5 for the same identical medical service to a welfare recipient which is reimbursed at maximum full cost by the state in the fixed installation. It is even a bit more self defeating when it is realized that the fixed overhead for a physician in his office has reached a level somewhat higher than the actual fee he is allegedly reimbursed for by the State Welfare Department for providing medical care to a Welfare recipient in his office. It is germane to report that the charge for a Welfare patient in the outpatient hospital department does not carry a physician component or charge. Were the generosity of the physicians in the State of Rhode Island to lessen, and were they to refrain from seeing Welfare patients in the outpatient department for free, would not this escalate the hospital charge to the Social Welfare Department even further?

In addition to dictating physician fee schedules and eliminating the two per cent contingency hospital allowance, Medicaid deductions will be sought by three other means: 1) imposition of a 120 day limitation on federal payments for mentally ill patients in state and public institutions; 2) plans for special review of hospital utilization practices to

(Continued on next page)

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cut down on the number of Medicaid patients in nursing homes who could be cared for by other means and 3) elimination of federal matching funds for cosmetic orthodontics.

The average length of hospital stay, the total number of Rhode Island Medical Assistance cases and type of service in the various hospitals varies broadly. This committee requests the House of Delegates of the Rhode Island Medical Society to appoint a committee, or to use other suitable means, whereby the Rhode Island Medical Society can take a long hard look and examine the multiple outpatient hospital departments and accident rooms, especially regarding their management, cost structure and discipline with a view to ascertain why there apparently exists a disparity among these facilities and their charges for identical medical services as contrasted with the private physician's office.

It is also this committee's judgment to request of the House of Delegates that it be the sense of the House to declare that *Peer Consultation Review Committees* be appointed by each of the component medical, general and surgical specialty groups within the Medical Society. Each Peer consultation review committee of perhaps three members appointed by their responsive organizations, should provide a mutual understanding by the medical profession, by voluntary prepayment groups and the health insurance industry of each other's point of view. Grievance committees should not be used to handle cases referred by third party payers on which only advice is being sought. These Peer Review Committees should receive wide publicity and the Society should explain their purpose and function.

The Council on Medical Service's report of the American Medical Association on *The Medical Profession and Peer Review* is published in the September, 1969 issue of the RHODE ISLAND MEDICAL JOURNAL. Interest in Peer review is generated by concern over the continuing cost of health care, particularly for hospital service in the resulting steadily rising rates required from the public for health benefit protection. In accepting a responsibility for Professional Review activities, the Rhode Island Medical Profession is demonstrating its awareness of the need to conserve the patient health care dollar, to assure the appropriate use of health care personnel and facilities and to maintain high standards in medical practice.

The AMA Council will sponsor a *Medical Service Conference* in Denver, Colorado, on November 29, 1969. The entire session will be devoted to the exploration of methods for implementing review activity which will be responsive to the needs of

all the parties concerned with the delivery and financing of quality health care.

PETER L. MATHIEU, M.D.

Chairman

DIABETES COMMITTEE

The Diabetes Committee held two meetings to plan the Annual Diabetes Fair. The Committee met on June 16, 1969, when preliminary plans were outlined for the Diabetes Fair to be held in the Fall. There was also a discussion on the use of the Unopette for diabetes screening in the physicians' offices in cooperation with the Department of Health. The Health Department would supply the materials and the laboratory services, and the Medical Society offered to mail out the letters to the physicians.

The Diabetes Committee, together with affiliated agencies, met September 9, 1969 at the Medical Library, and set the date for the Diabetes Fair on Wednesday, October 8th from 9 a.m. to 7 p.m. at the Cranston Street Armory.

Also pointed out was that the Chestmobile had been reserved along with the Cranston Street Armory for October 8th. The Sightmobile of the Lions Club, will make its first appearance at the Annual Diabetes Fair.

Discussion was held on the need for volunteers, the time for various shifts, and the organizations which would supply volunteers. It was agreed that each of the affiliated agencies would provide five volunteers per shift. The shifts were set at: 9 a.m. to noon; noon to 3 p.m.; 3 p.m. to 5 p.m.; and 5 p.m. to 7 p.m.

Also discussed was the availability of doctors to answer inquiries about diabetes at the Armory, the emphasis in publicity of the administration of the blood test, not the urine test at the Fair, and the distribution of posters.

The affiliated agencies were asked to contact the chairman when representatives have the names and or numbers of their volunteers for the fair.

Committee members present were: Dr. Russell P. Hager, Dr. Betty B. Mathieu, and Dr. William Reeves. Also, Denise Beaulieu of the Providence Medical Assistants; Mr. Julian M. Marcello of the Rhode Island Association of Clinical Laboratories; Dr. Dante Cedrone of the Rhode Island Podiatry Society, Mrs. Edward Hochman of the Women's Auxiliary of the Podiatry Society; Mrs. Levon Sahagian of the PTA; Mrs. Daniel Calenda and Mrs. Richard Dyer of the Medical Society Auxiliary; Mrs. Norma Kelvey of the Health Department; Mr. Malcolm Hinchliffe of the Department of Health; Mr. Daniel DeMatteis from HEW, chairman of the fair; and Edward J. Lynch, assistant executive secretary of the Medical Society.

JEAN M. MAYNARD, M.D.

Chairman

(Continued on Page 639)

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Obesity Oddities

FACT & LEGEND

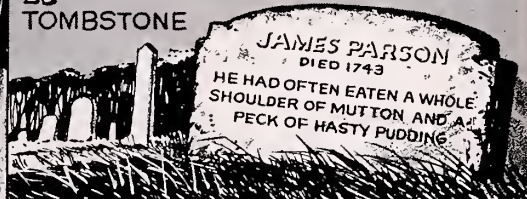
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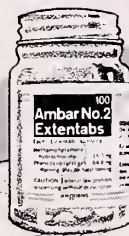
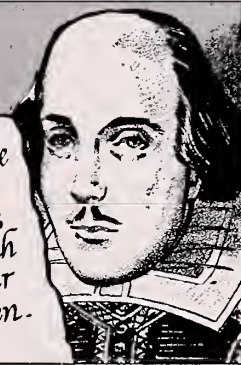
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TOMBSTONE



SHAKESPEARE

WAS AWARE OF THE
DANGERS OF OBESITY
HE WROTE...

*Make less thy body hence
and more thy grace,
leave gormandizing;
Know thy grave doth
gape for thee wider
than for other men.*



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BRIEF SUMMARY/Indications: Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

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PARKE-DAVIS

HOUSE OF DELEGATES

(Continued from Page 638)

BENEVOLENCE FUND

The Benevolence Fund has continued to aid six physicians and their families during the recent months, and the Trustees are receptive to any reports from members of the Society of a member who may need temporary assistance, or even continuous aid, due to severe financial problems.

In December a mailing was made to the membership of the Society inviting contributions to this most worthwhile program, and the Trustees are most appreciative of the response by physicians to this request which has provided \$1,500 to the fund in the past six months.

Contributions are tax deductible, and we urge members who have not contributed to the Benevolence Fund to consider doing so during the coming months.

DAVID FREEDMAN, M.D.
Chairman

COMMITTEE ON NURSING

The Committee on Nursing, with the cooperation and the assistance of nursing organizations, sponsored a Nurse of the Year Award, and a presentation was made at the annual meeting of the Society in May.

The Committee plans to continue this award in 1970, and it asks the approval of the House, and authorization for the expense involved in providing the trophy.

The Committee has held several meetings to consider plans for nurse recruitment in Rhode Island, and it will cooperate in statewide publicity programs promoting such a career for young men and women.

The Chairman has been consulted by several local nursing organizations for counsel on matters involving medical and nursing problems.

A questionnaire distributed by the National Commission for the Study of Nursing and Nursing Education has been answered by us for Rhode Island, and we are hopeful that studies such as this one will contribute materially to the recruitment of nurses in the future.

MAURICE ADELMAN, M.D.
Chairman

MEDICAL ASPECTS OF SPORTS COMMITTEE

I have the pleasure of informing you that the Committee on the Medical Aspects of Sports held another very successful meeting on August 21 and 22 at the University of Rhode Island. One hundred and seventeen registrants from twenty-one different states attended the meeting. Among the states represented were: California, Kentucky, Colorado, North Carolina, Oklahoma, Illinois, Ohio, etc.

Dr. Joseph Godfrey, Professor of Orthopedic

Surgery at the State University of New York at Buffalo and Orthopedic Surgeon to the Buffalo Bills of the American Football League, gave three exceptionally interesting talks on various phases of athletic injuries and equipment.

Tom Healion, Head Trainer in the Department of Intercollegiate Athletics at the University of Indiana gave interesting talks of particular interest to trainers.

We considered the meeting a rather successful one particularly in view of the fact that meetings of this kind have sprung up all over the country.

We were so gratified by the attendance that we are planning on conducting another meeting in August, 1970.

A. A. SAVASTANO, M.D.
Chairman

SUBCOMMITTEE ON ALCOHOLISM

The Subcommittee met several times throughout the past year at the home of Dr. Barry B. Mongillo who was the chairman during the past year.

It has been recognized that in spite of some progress being made in Rhode Island toward treatment control, and prevention of alcoholism, the problem persists and lately it seems to include even younger people and many females. Many people, for whom unfortunately alcoholism has become a way of life, are psychologically susceptible

(Continued on next page)

NEW!

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For ALL RHODE ISLAND MEDICAL SOCIETY MEMBERS under age 60.

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This new plan will be very attractive in comparison to most individual policies and compares very favorably with other group plans.

If you desire coverage, NOW, or will be interested in advance information, write or phone:

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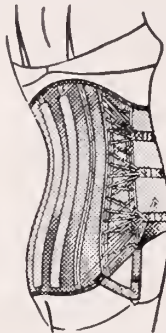
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individuals who depend on alcohol and/or drugs to avoid reality and escape tensions and anxieties. In addition to alcohol, itself, many other drugs — narcotics, barbituates, amphetamines, marijuana, LSD and other hallucinogens are being used and abused and the Subcommittee concerned itself with this problem as well.

Recommendations:

Physicians are urged to avail themselves of a copy of the book entitled "Drug Dependence — A Physician's Guide," furnished by the AMA, so they may be in a better position to fulfill their role as to the education of the dangers of drug abuse and so that they may be better able to discharge their duties on the prevention of drug dependence. Drug dependence and alcohol addiction are medical syndromes and, therefore, medical responsibilities.

Upgrade specific treatment centers for alcohol and drug abuse and testing laboratories in order to accurately determine qualitatively and quantitatively alcohol, barbiturates, amphetamines, etc.

Establishment of a separate Subcommittee for Drug Abuse to deal more specifically and efficiently with the problem of addiction other than alcohol.

Suggestion:

Conference of Medical Society and Rhode Island Bar Association in regard to use and abuse of alcohol and drugs.

LEO COK, M.D.

Chairman

PERINATAL MORTALITY COMMITTEE

On June 6, 1969, we were notified by The National Foundation that our perinatal mortality study grant had been extended for another year.

Currently we are validating the information from the state's vital statistics forms by reviewing at random corresponding data in hospital records. We have received complete cooperation from every hospital in the state including the Naval Hospitals and the Osteopathic General Hospital.

The study has already demonstrated the need of practical community health education programs relating specifically to pregnancy. There is also an urgent need for physician instruction regarding definitions, terms and fetal death registration forms.

Representatives of this committee are working with private and state agencies to develop effective programs to educate young women from 12 to 18 years of age. The committee has under consideration several plans aimed at correcting common physician mistakes and misconceptions involving the registration forms which lessen the usefulness of these records for obtaining accurate and comparable data.

(Continued on Page 648)

Book Reviews

THE ANDROMEDA STRAIN, by Michael Crichton, Alfred A. Knopf, New York, 1969. \$5.95

If you had read "Possible Contamination of Earth by Lunar or Martian Life," in *Nature* of May 3, 1969, by M. Alexander, soil microbiologist of Cornell University, you would have understood why the lunar astronauts were quarantined in the decontamination chamber at the Lunar Receiving Laboratory in Houston, Texas. Buried fifty feet beneath the earth's surface and protected by five foot thick walls, this re-entry chamber was well conceived. Few read *Nature*; many read novels. *THE ANDROMEDA STRAIN* tells of the potential hazards from the introduction of new biologic forms by lunar and martian landings, and makes good science fiction. Its release was also perfectly timed to coincide with the lunar landing.

The story goes thus: Scoop VII, an unmanned research satellite, is sent to the fringes of space to "scoop up" circulating spores of ancient bacteria, viruses, or other primordial pristine biologic forms. A chance collision with debris from another planet contaminates this satellite and skews it slightly out of orbit, bringing the capsule down in the midst of a small Arizona town. An entirely new life form based on a totally different "organic" chemistry — not the carbon and nitrogen system of earth — is introduced into our ecological system with such virulence that within twenty-four hours the entire population of the small Arizona town, with the exception of two individuals, is wiped out.

The possibility of earth contamination has been anticipated. An excellent report was published in 1965 by the Space Science Board of the National Academy of Science — National Research Council titled "Potential Hazards of Bacterial Contamination from the Planets." The prototype of the fictional "Project Wildfire" of this novel has been well considered by the National Aeronautics and Space Agency. "Project Wildfire" is set in motion at the first indication of earthly contamination by foreign life. The project called for the crash mobilization of the previously alerted best scientific and medical resources in the country; all runs very smoothly according to a predesigned computerized operational plan. The argument of the novel is the resolution of an epic attempt by four brilliant scientists to unravel the mystery of the sudden death of this small Arizona town. They must determine what the new life form is, how it functions, and how it can be controlled. The author further must

consider the political and sociological implications of the uncapping of this Pandora's box — if we would relate to the Classical Greek mythology. The four scientists, Jeremy Stone, Mark Hall, Peter Leavitt and Charles Burton, are all quickly and surreptitiously whisked away to a totally camouflaged concealed subterranean "Wildfire laboratory" in Nevada.

This is exciting reading for a physician because it is written by a very gifted and unusual doctor, Michael Crichton, now twenty-seven years of age, educated at Harvard College and the Harvard Medical School. His work shows erudition and understanding of modern biological techniques, modern technology, and modern practical applications of the computer; above all he appreciates the philosophical implications of this modern science and biology. The proposition that our own earthly "organic" chemistry, based on the elements carbon and nitrogen, does not necessarily preclude life forms based on another system, is a fundamental scientific concept. Equally important in modern science is the concept of miniaturization with the preservation of function. What may in highly complex organisms require organs and organ systems could very well be done by molecules, by atoms, or even by remotely sub-atomic elements. By proper system designs molecules in a miniaturized system will functionally replace organs. The evolution of the computer itself is a good example of miniaturization, as are all solid state phenomena. D'Ethier has brilliantly shown that the miniaturized bee brain is capable of "thinking" as we conceive it.

Crichton's book is replete with references to the conjectures, concepts, and concerns in contemporary science. This contributes to the spice and pleasure of a book which is superbly written technically, grammatically, and rhetorically. The book has form, a dedication to ACD "who first proposed the problem," "golden texts" from fictional characters, and well-chosen illustrations. All are fictional, but all have convincing credibility in the fictional world he has created.

Crichton at twenty-seven has acquired more than an adequate medical education; he can handle well his clinical problems. The disease produced by the "andromeda strain" is the destruction of blood vessel walls associated with hyper-coagulability of blood. The author's reading has extended into the more rigorous aspects of the behavioral sciences. This we know by his introduction of an

(Continued on next page)

"odd man theory." The quantitative measurement of human behavior, decision-making, and stress reactions makes it possible to incorporate in any system design an individual whose predictable behavior pattern allows maximum function of the system. Crichton uses this concept at a very critical point in rapid-fire decision making which had been anticipated in the "Project Wildfire." In contrast to the incredible technology which the novelist describes, the human beings with whom he is concerned have evolved little. The four principle characters who are scientists called to this remote camouflaged subterranean Nevada laboratory are all rather stereotyped scientific types, types which Crichton must have known, but whose characterizations are little more than pen and pencil sketches. Primarily the author is not involved in this novel with moral or philosophical decisions, or deep psychological penetration; he has kept to the single viewpoint — that of telling the scientific story. It may even be said that Crichton's men behave in a very "programmed" way, so that the spice the author has given to the scientists' lives is rather tasteless, and consists mainly of a number of divorces and brief mention of current liaisons. This cannot be criticized, since the author has maintained his singleness of viewpoint and has never lost sight of his primary purpose of telling a good story.

The moral aspects of *THE ANDROMEDA STRAIN* have already been anticipated almost as well as the main problem itself. Sir MacFarlane Burnett, the distinguished Australian Nobel laureate in his *NATURAL HISTORY OF INFECTIOUS DISEASES*, wrote an Epilogue in which many of the moral questions involved have already been raised. There is a close relevance of a discussion of biological and chemical warfare to the moral and philosophical issues involved in the possible introduction of new lethal life forms by contamination. The moral issues involved in handling the contamination are similar:

"It is no secret that active research on the military use of disease-producing bacteria has been in progress since early in the Second World War. Much of the work done in British and American laboratories has provided results of great interest to bacteriologists generally, and has been more openly published in the technical journals. . . . But the use of biological warfare is an absolute novelty, a complete break in the tradition of war as an extension of personal combat. As Vannevar Bush has pointed out, there is bound to be an intense resistance on the part of the statesmen and generals to the use of such a method, not necessarily from any moral

feelings, but simply because of the intrinsic human resistance to any violent break with an existing social pattern. . . . The other side to human conflict is, as we all know, 'human nature,' selfishness, aggression and desire for power on the one hand, loyalty to individuals, groups or ideas on the other.

So we come to a strange and gloomy ending of this account of the natural history of infectious disease. Science having freed a large portion of the human race from every type of pestilence, and being potentially capable of doing it equally effectively for the rest, now stands poised to create new more lethal and more uncontrollable plagues than ever sprang from nature. The one star of hope in the gloom is that biological science, along with its development of this sinister power, is just as definitely pointing the way by which human conflict can be understood and, if we desire it fervently enough, controlled."

THE ANDROMEDA STRAIN is a remarkable review of the recondite in recent medical and general technological advances. This is made intelligible by a very gifted young physician who, by his gift of redaction to the novel form, tells us that the Space Age, related new problems, and technical solutions are here. He further tells us that the problem of the human being is still here and unchanged, as shown in his sketchy stereotyped portrayals of the scientists. Perhaps the greatest moment of the novel, and one that portrays his measure as a novelist, is the critical occasion when a human being must through free will use all of his ingenuity and psychological and physical strength to thwart the carefully conceived and computerized program which had failed totally to conceive of all of the logical possibilities. The program, which had relied upon the detonation of an atomic bomb to destroy the invading "andromeda strain," went awry; the "andromeda strain" was capable of using the naked energy from the explosion of the atomic bomb for its own growth. Crichton not only has shown the capability of the human mind to conceive of a new situation, but also has made a hero of man in his capacity to make a decision, and to act by the free will of choice.

Just as the human character has changed little since the beginning of time, so it seems to this reviewer that the best tradition of medicine has changed little. This young man with his brilliant, inquisitive, contemporary, capable, and clinical mind demonstrates his capacity to convey concepts cleverly, clearly, convincingly, and in the best traditions of the good writer. In the Davenport Collection of the Library of the Rhode Island

(Continued on Page 643)

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BOOK REVIEWS

(Continued from Page 642)

Medical Society this scientific novelist physician takes his proper place.

ROBERT V. LEWIS, M.D.

GENETICS AND COUNSELING IN MEDICAL PRACTICE by Leonard E. Reisman and Adam P. Matheny, Jr. The C. V. Mosby Company, Saint Louis, 1969. \$12.75

This book of 200 pages is written for the non-specialist. The more common clinical techniques employed in diagnosis are described. There is a good discussion of the principles of inheritance and the causes of genetic damage.

Parental counseling in regard to the care and management of the patient, his training and education, and especially the risk involved in future pregnancies, is perhaps the main function of the geneticist. This is well taken up in the Down's syndrome, the autosomal abnormalities, the sex chromosome abnormalities, and mental retardation.

Genetics is our newest subspecialty and is only some twenty years old but already has a large literature. This book will bring you up to date and should be welcomed in any pediatric library.

H. G. CALDER

THE EVOLUTION OF PREVENTIVE MEDICINE IN THE UNITED STATES ARMY, 1607-1939, by Stanhope Bayne-Jones, M.D. Office of the Surgeon General, Department of the Army, Washington, D.C., 1968. U.S. Government Printing Office, \$2.50

This easy-to-read historical monograph gives a fascinating account of the principles and development of prevention of disease among soldiers, from the founding of the English settlement at Jamestown, Virginia in 1607 to the pre-World War II year of 1939.

The United States Army did not come into existence until June 1775, but the author includes the 168 years preceding the American Revolutionary War to show how the colonists, fighting in British ranks during these many years, gained knowledge of British military sanitation, hygiene, and preventive medicine which later became a code for the Revolutionary Army.

Students of medical history will recognize famous names such as Sir John Pringle, Surgeon General of the British Army, founder of modern military preventive medicine, and originator of the Red Cross concept; James Lind, Surgeon in the

Royal Navy, promoter of the use of citrus fruits and fresh vegetables to prevent and cure scurvy; Cotton Mather, theologian and clergyman, who encouraged Zabdiel Boylston to immunize against smallpox by inoculation (variolation) in Boston in 1721. The list includes others — George Washington, Walter Reed, Florence Nightingale, James Simmons, and many more — who played important roles during and between wars to advance the cause of preventive medicine. Photographs and short biographical sketches complete the picture.

One should not criticize but sympathize with the crude beginnings of preventive medicine as long ago as the Colonial Period. As Doctor Vanevar Bush expresses it: "We are apt to smile at crudities when a just estimate should rather leave us to marvel that so much was accomplished with so little."

Some basic principles in those times are still in use in the United States Army today. The principles, scant and undisciplined at first, became less empirical and more scientific throughout the years, particularly with the impact of the bacteriological era in the last quarter of the 19th century and the epidemiological (statistical) period beginning in the mid 1800's.

Progress was uneven between and during wars, and the author brings this out in different chapters, recounting in arbitrary divisions, the various periods centered chiefly around the wars which occurred between the Colonial Period and World War II, because "wars have regularly sparked an upsurge in preventive medicine knowledge and practice."

Military preventive medicine is the public health of the community of the Army, both the military and the civilian communities gained from each other with each advance in "public health." For example, during the Revolutionary War "ten men died of disease to every one whose life was taken by the enemy," as compared to the death rate in World War I when the ratio of battle deaths to death from disease was 1 to 1 for the first time.

The size of the monograph belies the amount of research which went into its compilation when one recognizes a total of 199 references which take up 25 pages.

The author promises a sequel to this monograph "in which will be described the application of the old and newer preventive medicine, and the establishment of some new principles, in the global setting of World War II."

It should make interesting reading also and will be eagerly awaited.

JEAN M. MAYNARD, M.D., M.P.H.

HEALTH MANPOWER IN RHODE ISLAND

*Statistical Data Compiled by the
Department of Health of the State
of Rhode Island*

TABLE I
NUMBER AND RATE PER 100,000 POPULATION FOR ACTIVE PHYSICIANS*
BY MEDICAL SPECIALTY
FOR RHODE ISLAND (1968) and the UNITED STATES (1967)

SPECIALTY	POPULATION			
	RHODE ISLAND 914,000		UNITED STATES 198,650,000	
	Number	Rate	Number	Rate
General Practice	363	39.7	91,944	46.3
Internal Medicine	185	20.2	47,787	24.1
Surgery	152	16.6	33,681	17.0
Neurology and Psychiatry	96	10.5	23,326	11.7
Pediatrics	90	9.8	17,678	8.9
Obstetrics and Gynecology	87	9.5	18,044	9.1
Orthopedics	60	6.6	8,499	4.3
Anesthesiology	54	5.9	9,810	4.9
Radiology	40	4.4	11,009	5.5
Pathology	33	3.6	9,564	4.8
Otolaryngology	29	3.2	5,606	2.8
Ophthalmology	21	2.3	9,216	4.6
Urology	17	1.9	5,487	2.8
Dermatology	16	1.8	3,816	1.9
Neurological Surgery	11	1.2	2,320	1.2
Miscellaneous**	9	—	6,352	—
TOTAL	1,263	138.2	304,139	153.1

*Including M.D. and D.O.

**Includes Aviation, Preventive, Occupational, Physical and Rehabilitative Medicine, and Public Health.

Rhode Island miscellaneous is composed of 5 Physical and Occupational Medicine Specialists and 4 Public Health Specialists.

Source: Rhode Island — Department of Health, Division of Professional Regulation.

United States — DHEW, National Center for Health Statistics. *Health Resources Statistics*, Table 81, p. 128.

TABLE II
AVERAGE AGE OF ACTIVE RHODE ISLAND PHYSICIANS*
BY MEDICAL SPECIALTY

SPECIALTY	Number	Average Age
General Practice	363	54.3
Internal Medicine	185	49.3
Surgery	152	51.2
Neurology and Psychiatry.....	96	48.0
Pediatrics	90	47.3
Obstetrics and Gynecology.....	87	49.2
Orthopedics	60	48.4
Anesthesiology	54	48.7
Radiology	40	46.8
Pathology	33	45.2
Otolaryngology	29	55.8
Ophthalmology	21	49.9
Urology	17	52.2
Dermatology	16	53.4
Neurological Surgery	11	45.2
Industrial and Physical Medicine.....	5	—
Public Health	4	—
TOTAL	1,263	50.3

*Including M.D. and D.O.

Source: Department of Health, Division of Professional Regulation.

TABLE III
Medical Manpower per 100,000 Population

	Rhode Island	New England	United States
1. Physicians	138	161	125
2. Dentists	47	55	46
3. R.N.'s	409	509	313
4. L.P.N.'s	228	241	128

1. As of 12-31-67, includes M.D.'s and D.O.'s, and only those active non-federal physicians providing medical care.

Source: DHEW, National Center for Health Statistics, Health Resource Statistics. Table 80. p. 126.

2. As of 7-1-67, includes only active non-federal dentists.

Source: DHEW, National Center for Health Statistics, Health Resource Statistics. Table 34. p. 63.

3. As of 1966, includes only active nurses, 31% of licensed R.N.'s are estimated to be inactive.

Source: American Nurses' Assn., Facts About Nursing, 1968 Edition, p. 13.
(Rhode Island rate for 1968 estimated to be 541.)

4. Rhode Island rate for 1968, others for 1966, includes only active practical nurses, 21% of LPN's are estimated to be inactive.

Source: American Nurses Assn., Facts About Nursing, 1968 Edition, p. 180 for New England and United States. Rhode Island figures from Division of Professional Regulation.

TABLE IV
Numbers and Rates Per 100,000 Population
for Selected Allied Health Professions

Allied Health Profession	Rhode Island No.	Rhode Island Rate	United States No.	United States Rate
Dental Hygienist	193	21.4	15,000	7.7
Nutritionist	162	18.9	26,119	14.6
Occupational Therapist	19	2.1	7,490	3.8
Optician	50	5.6	(not available)	
Optometrist	160	17.8	20,565	10.5
Pharmacist	717	80.0	122,421	61.6
Physical Therapist	68	7.6	8,506	4.3
Podiatrist	132	14.7	8,159	4.2
Psychologist (Health Field)	14	1.6	7,732	3.9
Speech Pathologist				
and Audiologist	43	4.8	11,896	6.1
Veterinarian	42	4.7	25,466	13.0
X-Ray Technician	259	28.8	48,707	24.9

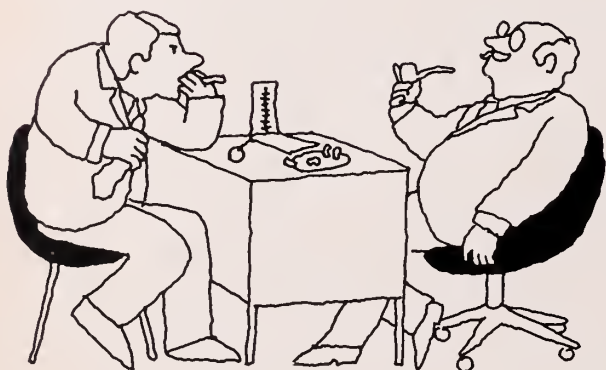
Source: Rhode Island—Department of Health, Division of Professional Regulation and Program Development.

United States—DHEW, National Center for Health Statistics, Health Resource Statistics.

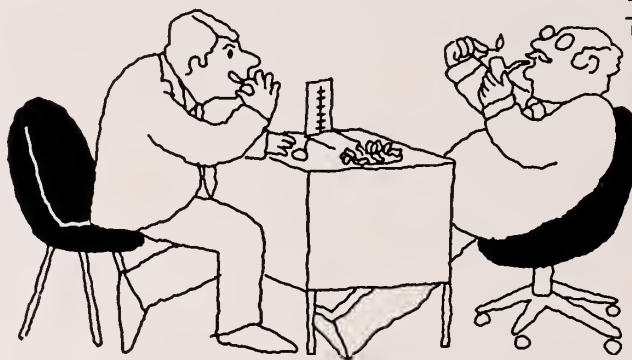
(Continued on Page 648)

The Apprehensive Hypertensive

WELL, YOU HAVE WHAT WE CALL MODERATE HYPERTENSION—HIGH BLOOD PRESSURE. NOW I DON'T WANT YOU TO WORRY, BUT WE ARE GOING TO HAVE TO CHANGE A FEW LIVING HABITS. FIRST, WE'RE GOING TO HAVE TO CUT OUT SMOKING—ALTOGETHER.



THEN WE HAVE TO LOSE WEIGHT. 20 POUNDS SHOULD DO IT... WE'LL TALK A LITTLE LATER ABOUT THIS DIET WE'RE GOING TO START.



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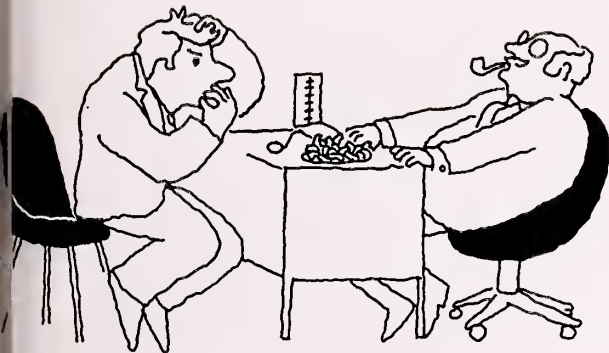
chlorthalidone 50 mg.
reserpine U.S.P. 0.25 mg.

Regroton®: chlorthalidone 50 mg., reserpine U.S.P. 0.25 mg.

Indications: Hypertension. **Contraindications:** History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. **Warning:** With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs. **Use in pregnancy:** Because chlorthalidone may cross the placental barrier and appear in cord blood and thiazides may appear in breast milk, this drug should be used with care in pregnant patients and nursing mothers. When used in women of childbearing age, the potential benefits of the drug should be weighed against the possible hazards to the fetus. Use of chlorthalidone may result in fetal or neonatal jaundice, thrombocytopenia, and possibly

other adverse reactions which have occurred in the adult. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers. **Precautions:** Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Avoid hypotension during surgery, discontinue therapy with this agent two weeks prior to elective surgical procedures. In emergency surgery, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given provided the patient does not have marked oliguria. Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving

WE'VE GOT TO GET
PLENTY OF REST AND
TRY TO AVOID SITUATIONS
THAT MAKE US ANXIOUS
OR TENSE. AND WE'LL
TAKE MEDICINE TO LOWER
OUR BLOOD PRESSURE
AND CALM US DOWN.



WE'VE GOT
PROBLEMS.




and allay anxiety in hypertension

steroids, ACTH, or digitalis. Severe salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients. **Adverse Reactions:** The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness, acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be precipitated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, convulsions, intravitreal injection, increased susceptibility to colds, dyspnea, weight

gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angitis are possible. **Average Dosage:** One tablet daily with breakfast. **Availability:** Pink, single-scored tablets in bottles of 100 and 1000. (B) 46-600-C
For details, please see complete prescribing information.

Regroton®

chlorthalidone 50 mg.
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 Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York 10502

RE-6742

HEALTH MANPOWER IN RHODE ISLAND

(Continued from Page 645)

TABLE V
Annual License Renewals by Medical Professions
Calendar Year Basis Through 1963
Fiscal Year Basis From July 1, 1963-June 30, 1968

Year	M.D.	D.O.	R.N.	L.P.N.	D.M.D. (D.D.S.)
1967-1968	1436	113	7367	2837	567
1966-1967	1381	118	7084	2423	526
1965-1966	1340	116	6071	2181	503
1964-1965	1229	105	595	1992	516
1963-1964	1213	106	5795	1927	499
1963	1220	104	5624	1938	502
1962	1226	103	5829	1990	516
1961	1196	107	5672	1985	609
1960	1167	103	5588	1826	493
1959	1337	95	6175	1808	533
1958	1202	103	5355	1663	535
1957	1130	91	5225	1488	503
1956	1086	92	4681	1361	541
1955	1052	148	4772	1406	528
1954	930	84	4464	1281	496

Source: Department of Health, Division of Professional Regulation.

TABLE VI
New Licenses Issued Annually to Medical Professions
Calendar Year Basis Through 1963
Fiscal Year Basis from July 1, 1963-June 30, 1968

Year	M.D.	D.O.	R.N.	L.P.N.	D.M.D. (D.D.S.)
1967-1968	91	1	563	254	20
1966-1967	71	4	547	197	22
1965-1966	70	8	480	174	18
1964-1965	65	6	436	167	14
1963-1964	54	5	417	151	22
1963	58	2	449	144	8
1962	79	9	396	144	10
1961	53	11	404	182	15
1960	53	8	370	171	11
1959	64	6	333	182	10
1958	73	15	333	161	8
1957	87	7	312	143	12
1956	82	4	325	120	12
1955	75	2	329	107	14
1954	59	2	315	76	17

Source: Department of Health, Division of Professional Regulation

DERMAQUIZ ANSWER

(See Page 601)

Left, a basal cell epithelioma.

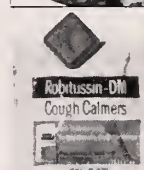
Right, a hemangioma. The higher temperature on the tumor is due to the circulating blood under a thin wall.

PERINATAL MORTALITY

(Concluded from Page 640)

The committee has been invited to send a representative to the National Volunteer Leadership Conference on December 6th, in San Diego, to present the details of its perinatal study as well as other community and professional projects.

BERTRAM H. BUXTON, JR., M.D.
Chairman



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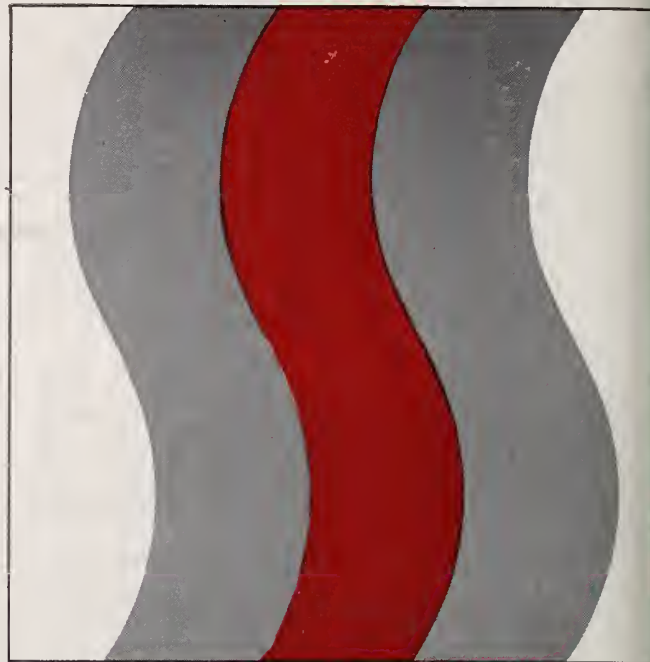
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Serve the community with





from the discord of anxiety... 1953

to emotional harmony

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OF MEDICINE

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Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported at recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

rhode island medical journal



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References: 1. Danhof, I. E.: Report on file. 2. Hoon, J. R.: Arch. Surg. 93:467 (Sept.) 1966.

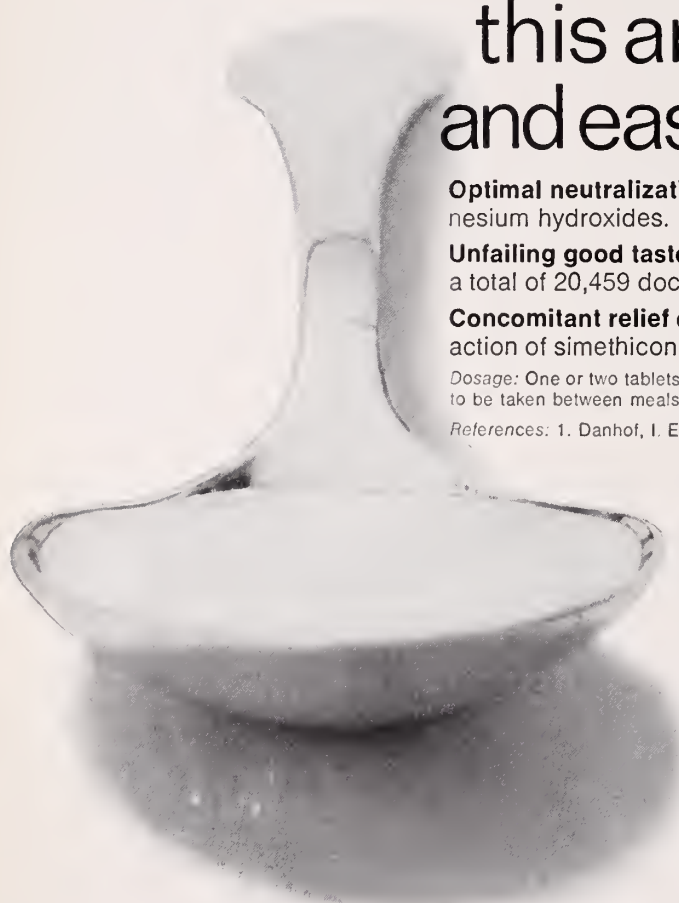
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(In vivo measurement of Lutrexin on contracting
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He is a diabetic.
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CAPSULE-SHAPED TABLETS Lederle **b.i.d.**

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Effectiveness: Because its antibacterial component is DECLOMYCIN Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, Nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in a bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, food and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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The RHODE ISLAND MEDICAL JOURNAL

Vol. LII, No. 12

December, 1969

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Masters In Medicine —

THE PHYSICIAN AND THE SURGEON

. . . *"In A Word, One Must Be Familiar With Both Departments of Medicine"*

HARVEY CUSHING, M.D. . . . 667

COMPOSITE EARLOBE GRAFTS FOR RECONSTRUCTION OF NASAL DEFECTS

. . . *Composite Earlobe Graft Produces Excellent Cosmetic
Result in Nasal Defects . . .*

HOWARD S. STURIM, M.D. . . . 674

OUR PRIZE POSSESSIONS

. . . *There Is A Feeling Of Presence In The Works They Left For Us . . .*

HELEN E. DE JONG . . . 677

THE USE OF ORAHESIVE IN THE SURGICAL TREATMENT OF PLANTAR VERRUCA

. . . *Adhesive Dressing Capable Of Adhering To Moist Surfaces
Facilitates Surgical Procedure . . .*

CAROLL M. SILVER, M.D., STANLEY D. SIMON, M.D., and HENRY
M. LITCHMAN, M.D. . . . 680

S.L.E.: A MODEL FOR THE STUDY OF IMMUNOLOGY

. . . *Disorder Is Auto-Immune In Nature With Exact Etiology
And Mechanism Obscure . . .*

GUY A. SETTIPANE, M.D. . . . 682

EDITORIALS

Harvey Cushing, M.D., 1869-1939 . . . 685

Close Ties . . . 685

S.L.E. . . . 686

Role Of Sulfonamides . . . 687

Urokinase For Pulmonary Embolism . . . 688

DEPARTMENTS

Book Reviews . . . 693

Dermaquiz . . . 653

Peripatetics . . . 652

Through the Microscope . . . 654

MISCELLANEOUS

Announcement of Increased Medicare Hospital Insurance Deductible and
Coinsurance for 1970 . . . 681

Health Cost Effectiveness Amendments . . . 663

School Health Program in Rhode Island . . . 696

Peripatetics

CENTRAL FALLS NURSE IN VIETNAM

MISS JESSIE ROSKOSKI, R.N., of Central Falls, a former member of the Notre Dame hospital staff in that city, completes a two year tour of duty in December as advisor to Vietnamese nurses at the Binh Duong Provincial Hospital at Phu Cuong, eight miles north of Saigon. The only American woman assigned to the hospital, Miss Roskoski has been in the area since 1968, and she is one of only two United States civilian women working in all the Binh Duong Province.

The hospital at which Miss Roskoski is an advisor is the only one in the province. It treats an average of 6,000 out-patients and 2,000 in-patients a month. Due to the lack of trained nurses — presently one per ward — Miss Roskoski has been faced with a major task in improving the facilities for the care of the sick and wounded, and in developing ideas that will improve the care of the patients.

In recognition of her outstanding work Miss Roskoski has been awarded the Health Service Medal by the national minister of health from Saigon. (see photo).



Miss Jessie Roskoski of Central Falls is congratulated by the national minister of health from Saigon after the award to her of the Health Service Medal 2nd Class for her work as hospital nurse advisor at Phu Cuong. The province chief — center, watches the ceremony.

LEONARD J. TRIEDMAN, Providence surgeon and chairman of the patient care committee at the Miriam hospital, was one of two Americans among eight speakers at an inaugural symposium at the Cancer Hospital in Madrid, Spain, in October. A graduate of Brown University and Harvard Medical School, Doctor Triedman was invited to discuss the topic "The Course of Tumor Expansion in the Face, and Its Treatment" at the first symposium on cancer of the head and neck to be sponsored by the Madrid hospital.

* * *

LLOYD L. HUGHES, executive director of Rhode Island hospital since 1962, was recently named Executive Vice President for the overall administration of the hospital with special concentration upon the planning for the new health care complex. LAWRENCE A. HILL was named as Vice President for Operations, effective the first of the year, and he will be concerned with all the aspects of the day-to-day running of the hospital including internal fiscal management and budgeting.

* * *

The Providence Medical Association recently inducted ten new members. Their names and specialties are: ANTONIA MARIA CIANCARELLI and SERAFINO GARELLA in Internal Medicine; HELEN I. SCHINAZI and ARTHUR I. GELTZER in Ophthalmology; NORMAN J. COWEN in Hand Surgery; KHODARAHM KHODARAHMI, Radiology; CATHERINE LA ROCHE, Child Psychiatry; MARIA L. V. NUNEZ, Obstetrics-Gynecology; JORGE H. STURAM, pediatric Allergy, and DAVID G. QUIGLEY, Orthopedic Surgery.

* * *

MELVIN D. HOFFMAN was honored for his distinguished service as chairman by the New England Regional Heart Committee at its first annual meeting recently held at the Colony Motor Hotel in Providence, Rhode Island. He was presented with a gavel as a token of appreciation.

* * *

At the Fifty-fifth Annual Clinical Congress of the American College of Surgeons, five Rhode Island surgeons received their Fellowship. They are, HOWARD S. BROWNE, JR. of Newport; JOSEPH DeLUCA, BRIAN A. DORMAN, KENNETH E. LIFFMAN, all of Providence; and JEAN A. MARCELLOT of Woonsocket.

(Continued on Page 653)

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for unearthly cough*

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EXPECTORANT

Each fluidounce contains: 80 mg.

Benadryl[®] (diphenhydramine
hydrochloride, Parke-Davis);

12 grains ammonium chloride;

5 grains sodium citrate;

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An antitussive and expectorant for
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BENYLIN EXPECTORANT
tends to inhibit cough reflex...
soothes irritated throat membranes.

And its not-too-sweet, pleasant
raspberry flavor makes BENYLIN
EXPECTORANT easy to take.

PRECAUTIONS: Persons who
have become drowsy on this or
other antihistamine-containing
drugs, or whose tolerance is not
known, should not drive vehicles
or engage in other activities re-
quiring keen response while using
this preparation. Hypnotics, seda-
tives, or tranquilizers if used with
BENYLIN EXPECTORANT
should be prescribed with caution
because of possible additive effect.

Diphenhydramine has an atro-
pine-like action which should be
considered when prescribing
BENYLIN EXPECTORANT.

ADVERSE REACTIONS: Side
reactions may affect the nervous,
gastrointestinal, and cardiovascu-
lar systems. Drowsiness, dizziness,
dryness of the mouth, nausea, ner-
vousness, palpitation, and blurring
of vision have been reported. Al-
lergic reactions may occur.

PACKAGING: Bottles of 4 oz.,
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Tetracycline HCl
unless it bears this signature.**



250 mg. and 100 mg. capsules

Contraindications: Hypersensitivity to tetracyclines.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons.

Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Nonsusceptible organisms may overgrow; treat superinfection appropriately. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Side Effects: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN.

Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.



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effective in mixed anxiety-depression and in moderate to severe anxiety

Before prescribing or administering, see Sandoz literature for full product information, including adverse reactions reported with phenothiazines. The following is a brief precautionary statement.

Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree.

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

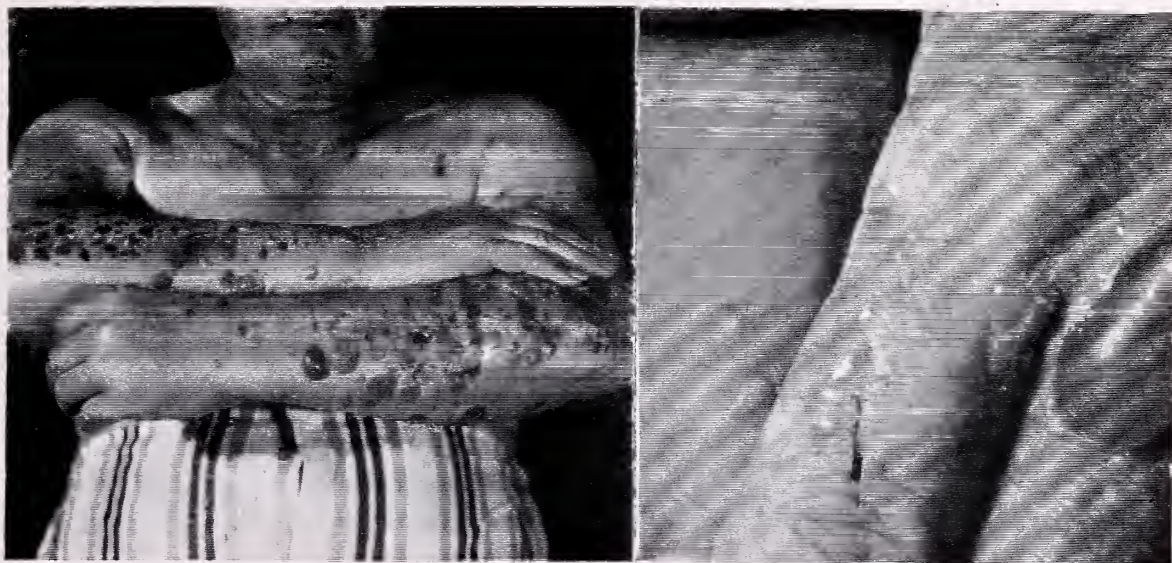
Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.



DERMAQUIZ

Conducted by FRANCESCO RONCHESE, M.D.



At left, bullae in various stages of development and involution. Duration: years. Distribution: all over the body. Discomfort: considerable.

At right, bullae and blisters, in peculiar linear formation. Distribution: exposed parts. Duration: a few days. Discomfort: very itching.

Answer on Page 696

PERIPATETICS

(Continued from Page 652)

The Memorial Hospital of Pawtucket in association with the Division of Biomedical Sciences of Brown University singularly honored MEYER SAKLAD by dedicating to him a recent Symposium on Lung Replacement in Man. Cognizance was taken of his accomplishments in anesthesia, biological research, and humanitarian pursuits. His many honors in the field of salon photography were noted, including prizes from *Saturday Review*. The public exercise was preceded by a banquet attended by his many friends and associates.

* * *

Rhode Islanders played a very important role in the recent New England Postgraduate Assembly held in Boston. SEEBERT J. GOLDOWSKY, President of the Council of the New England State Medical Societies and Editor of this JOURNAL, headed a roster of distinguished Rhode Island physicians who participated in this year's Assembly: STANLEY D. SIMON, President of the Rhode Island Medical Society; JEANNETTE E.

VIDAL; WALTER THAYER; PHILIP TORGAN; and ALDEN BLACKMAN.

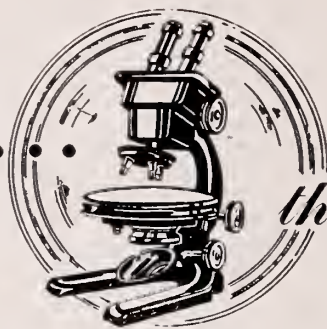
* * *

RAYMOND E. MOFFITT, President of the Rhode Island Society of Internal Medicine, recently attended the eastern regional meeting of the American Society of Internal Medicine in Washington, D.C. As a participant in the meeting, he described the organization of district society peer review committees in Rhode Island, and also the Medical Advisory Committee, organized to assist the Professional Advisory and Claims Committees of Rhode Island Blue Shield in solving problems related to internal medicine and general practice.

* * *

Long frustrated by diplomatic red tape, MANUEL DA SILVA of Bristol after years of effort finally persuaded the government of Portugal to abolish a requirement that Americans obtain visas before visiting the Azores, bringing those islands in line with previous practice for Madeira and mainland Portugal. This change in regulations will be welcomed by many Rhode Island residents.

THROUGH .



the Microscope

KEEP YOUR DISTANCE FROM THE TV SET

Why do TV sets put out X-rays? It's part of their operation and at present impossible to avoid completely. Color sets — because of their higher operating voltage — are more likely to produce X-rays than black-and-white models.

The potential for X-ray generation exists at three points in the TV set: at the high-voltage rectifier, the high-voltage shunt regulator, and at the picture tube. The X-rays produced by color TV sets, if any, have been accelerated by an electromotive force in the 25,000-volt range. Such X-rays are classified as "soft" (low penetrating power) in comparison with the "hard" X-rays used for testing and diagnostic purposes.

But the accumulated dose is a result of time as well as of intensity. A diagnostic X-ray may last for a fraction of a second; on the other hand, you may spend all evening close to your TV set.

Recommended safety procedures regarding televisions include the following:

- Follow to the letter the instructions furnished by the manufacturer of the set for making all needed adjustments to the set.
- Stay at least six feet away from the set when viewing it; do not permit children to lie on the floor with legs and pelvic area under the set.
- Every time the set is worked on be sure the technician leaves all protective shielding on the chassis intact.

X-radiation from TV sets, based on present knowledge, is nothing to panic about. But since there are still some unknown elements in the technical end of the field, caution is the wisest course.

("What's All the Talk About TV Radiation?" in *Family Safety*, Summer 1969)

* * *

MORE ABOUT LONGEVITY OF UNITED STATES SENATORS*

The study of the longevity of United States Senators reported in the May issue of the *Statistical Bulletin*, may have given the false impression

*See *Through the Microscope*, R.I. Medical Journal, October, 1969.

that service in the Senate since 1930 has been detrimental to long life. This study brought out that Senators who took office between 1860 and 1930 had on the average lived about as long as white males in the general population, but that the average number of years lived by the 144 Senators who took office between 1931 and 1966 and died by the end of 1966 was significantly shorter than the life expectancy of males in the general population.

The longevity record of the 144 Senators who died before the end of 1966 does not, however, provide a valid indication of the longevity of the entire group of 337 Senators who were first elected to office between 1931 and 1966. The actual average length of life of this group of Senators will not be known until the last of them has died. It is, nevertheless, possible to obtain a better measure of their relative longevity by comparing the total number of years lived by all of them to the end of 1966 with the number of years they might have been expected to live, based on contemporaneous death rates of white males in the general population.

Such a criterion indicates that the 337 Senators first elected between 1931 and 1966 have on the average lived 1.5 years longer to the end of 1966 than white males in the general population born in the same years as the Senators. It is not unreasonable to expect that Senators should on the whole have a better than average life expectancy, considering their socioeconomic status and the fact that prominent men have usually experienced superior longevity.

... Reprinted from the July, 1969, Issue of the *Statistical Bulletin* of the Metropolitan Life Company.

* * *

STRICTER CONTROL OF COUGH SYRUPS PROPOSED

The Pharmaceutical Manufacturers Association has supported a proposed new regulation by the Justice Department's Bureau of Narcotics and

(Continued on Page 655)

Inner Sites...

In Cystitis...Azo Gantanol[®]
focuses analgesic-antibacterial
activity where it counts



The mucosa:
specific analgesia
usually within 30 minutes

Azo (phenazopyridine HCl) effects specific mucosal analgesia, relieving the dysuria, discomfort and burning which are virtually always a part of acute urinary tract infections.

Interstitial fluids:
ready diffusion of
antibacterial

Gantanol (sulfamethoxazole) is readily diffused into interstitial fluids to provide efficient antibacterial activity at foci of infection. This distribution, plus continuous antibacterial levels in blood and urine, has afforded effectiveness in the majority of infections in which it has been used.

Blood and urine:
therapeutic antibacterial
levels within 2 hours
for up to 12 hours

Gantanol (sulfamethoxazole) produces prompt and prolonged therapeutic levels, in both blood and urine, with convenient *b.i.d.* dosage. Clinical response is usually obtained within 24 to 48 hours. The wide antibacterial spectrum of Gantanol includes *E. coli* and a variety of other susceptible gram-negative and gram-positive pathogens in urinary tract infections.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Urinary tract infections with associated pain or discomfort when due to susceptible organisms; prophylactically in urologic surgery, catheterization and instrumentation.

Contraindicated in sulfonamide-sensitive patients, pregnant females at term, premature infants, newborn infants during the first three months of life, glomerular

nephritis, severe hepatitis, uremia and pyelonephritis of pregnancy with gastrointestinal disturbances.

Warnings: Use only after critical appraisal in patients with liver damage, renal damage, urinary obstruction or blood dyscrasias. If toxic or hypersensitivity reactions or blood dyscrasias occur, discontinue therapy. In closely intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed.

Precautions: Observe usual sulfonamide therapy precautions including maintenance of an adequate fluid intake. Use with caution in patients with histories of allergies and/or asthma. Patients with impaired renal function should be followed closely since renal impairment

may cause excessive drug accumulation. Occasional failures may occur due to resistant microorganisms. Not effective in virus and rickettsial infections.

Adverse Reactions: Headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, Stevens-Johnson syndrome, injection of the conjunctiva and sclera, petechiae, purpura, hematuria or crystalluria may occur, in which case the dosage should be decreased or the drug withdrawn.



Roche
LABORATORIES

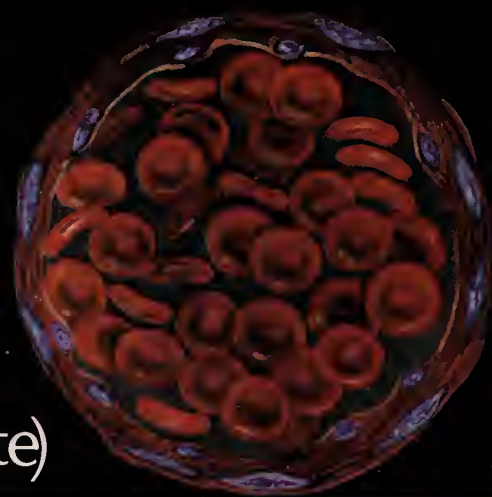
Division of Hoffmann - La Roche Inc.
Nutley, New Jersey 07110

Azo Gantanol[®]

(Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.)

Roniacol Timespan[®]

(nicotinyl alcohol tartrate)



Because peripheral vasodilation is needed now... and must often be continued

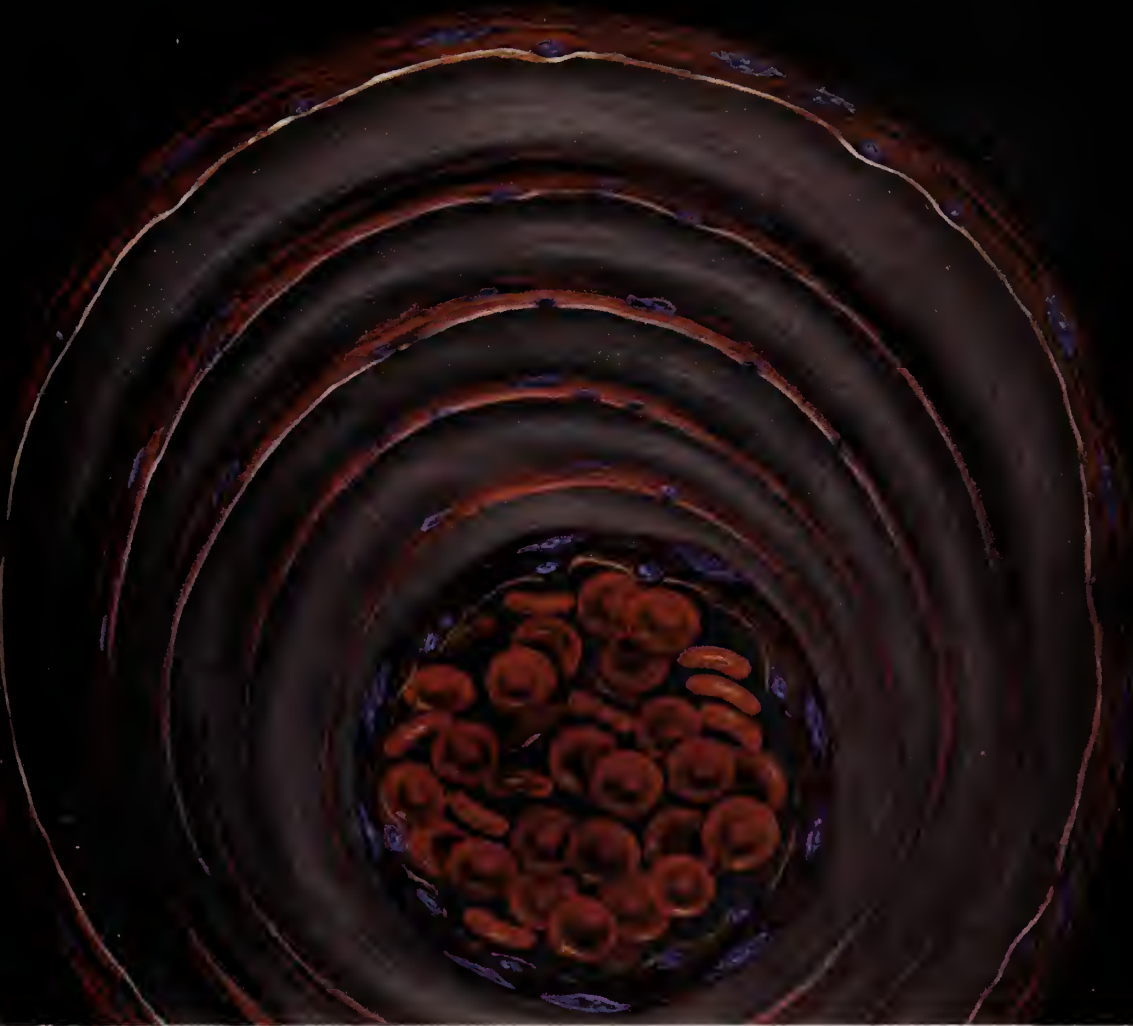
Roniacol Timespan (nicotinyl alcohol tartrate) can make a significant contribution to effective treatment of peripheral vascular disorders. It is directed specifically toward improvement of peripheral blood flow, relief of ischemic symptoms, and the long-term management of these conditions.

Specific pharmacologic action—Roniacol (nicotinyl alcohol) acts selectively by relaxing smooth muscle of peripheral blood vessels. Onset of action is smooth and gradual, rarely causing severe flushing.

Relative freedom from side effects—Side effects

that may occur occasionally with Roniacol seldom require discontinuation of therapy.

Prolonged, continuous drug release—Prolonged peripheral vasodilation is provided by sustained-release Roniacol Timespan (nicotinyl alcohol tartrate) Tablets. Part of the drug becomes available immediately, the remainder continuously over a period of up to 12 hours, and dilation of constricted peripheral vessels is usually maintained. Thus, with a single dose of medication, patients can enjoy the benefits of increased peripheral blood flow in ischemic extremities for up to 12 hours.



Smooth peripheral vasodilation from initial dosage...extended with simple, well-tolerated, b.i.d. dosage

The prolonged action of Roniacol Timespan (nicotinyl alcohol tartrate) together with its other benefits offer a therapeutically practical measure in the long-term management of peripheral vascular disease—advantages especially important for older patients.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Conditions associated with deficient circulation; e.g., peripheral vascular disease, vascular spasm, varicose ulcers, subital ulcers, chilblains, Meniere's syndrome and vertigo.

Caution: Roche Laboratories endorses caution in the administration of any therapeutic agent to pregnant patients.

Side Effects: Transient flushing, gastric disturbances, minor skin rashes and allergies may occur in some patients, seldom requiring discontinuation of the drug.

Dosage: 1 or 2 Timespan Tablets—150 mg nicotinyl alcohol in the form of the tartrate salt—bottles of 50 and 500.



Roche
LABORATORIES

Division of Hoffmann - La Roche Inc.
Nutley, New Jersey 07110

Art is a conception of peripheral vasodilation.

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.



The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.



**A realistic
approach
to pain
relief**

'Empirin'[®]

**Compound with Codeine
Phosphate gr. 1/2 No. 3**

Each tablet contains:

Codeine Phosphate gr. 1/2 (Warning—
May be habit forming), Phenacetin gr. 2 1/2,
Aspirin gr. 3 1/2, Caffeine gr. 1/2.

**keeps the promise
of pain relief**

'B.W. & Co.' narcotic products are
Class "B", and as such are available on oral
prescription, where State law permits.



BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.



THROUGH THE MICROSCOPE

(Continued from Page 654)

Dangerous Drugs that would impose stricter controls on the sale of certain cough syrups and other medications.

A letter from P.M.A. General Counsel Bruce J. Brennan to John E. Ingersoll, Director of the Bureau, declared the P.M.A. and its member companies "have long been concerned with the social, medical, and law enforcement problems related to drug abuse."

The P.M.A. said it was therefore offering its full endorsement of a proposed new regulation as published in the September 10 *Federal Register*. In essence, the regulation would establish additional controls over the sale of non-prescription narcotic-containing cough syrups, paregoric, and other such products to make sure they are used only for medicinal purposes.

Member companies of the P.M.A. produce a substantial number of such products made in the United States.

Under the proposal, such preparations henceforth would be subject to federal requirements that:

- (1) Sales be made only by registered pharmacists
- (2) Purchasers under age 18 would have to have a prescription
- (3) Purchasers provide suitable identification and pharmacists record the names and addresses of purchasers
- (4) Set quantity limitations on the amount sold to any individual within a 48-hour period.

* * *

COFFEE WHITENERS NOT FOR EVERYONE

Persons who are trying to avoid saturated fat should avoid the new liquid-cream substitutes. Although they employ vegetable oil, coffee whiteners may contain even more saturated fatty acids than found in milk.

Some coffee whiteners are promoted for use on cereal or fruits. Users should know that the mineral and vitamin content of these products is substantially less than that of milk or cream. Such beverages are not recommended for use by children as replacements for milk.

("Let's Talk About Food," in *Today's Health*, July 1969)

* * *

INCENTIVE PLAN SEEKS TO CUT HOSPITAL COSTS

Health, Education, and Welfare Secretary Robert H. Finch, has announced that 26 Southern California hospitals will soon begin to test a new method of payment for services with built-in incentives to cut costs and improve management efficiency.

The experiment will involve payments under Medicare, Medicaid (called Medical in California), and the Southern California Blue Cross Plan.

Under a contract between Social Security Administration and Blue Cross of Southern California, signed October 7 in Los Angeles, the 26 selected hospitals, chosen as representative of all Southern California hospitals, will be paid for services furnished Medicare beneficiaries under the new incentive system over a 3½-year period. This is the second contract signed by the Administration under the program for incentive reimbursement experiments, authorized under a provision in the social security amendments enacted January 2, 1968.

The first contract was signed last July 31 with the Connecticut Hospital Association.

The new method of payment in the Southern California experiment will also apply for services furnished MediCal beneficiaries and members of the Southern California Blue Cross Plan, under a separate contract.

Secretary Finch said the Southern California and Connecticut experiments, and others now being developed, are intended to find ways to get more value for the dollar spent on health care — to provide incentives to efficiency and economy and at the same time maintain a high level of quality care.

"Control of rising hospital costs," the Secretary said, "will benefit the entire health care system, private, as well as governmental."

Under the experiment to be conducted in Southern California, each hospital department will have certain production standards to meet and will be rewarded for any reduction in labor costs for the current year as compared with the previous year. Secretary Finch noted that sharing these savings with the hospitals that achieve them will encourage hospital management to develop and implement effective labor cost control procedures.

The incentive payment that each hospital receives will reflect its own improvement in reduc-

(Continued on next page)

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fluoroscopic unit. Cable transformer and
dark room equipment. Like new; must
sacrifice.**

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The NEW Disability Insurance Plans are to become effective 15 December, 1969!

Literature will be in your office before this Ad is read by you.

Send in your Applications as soon as they are received and help yourself as well as your fellow Members.

Every Member in good health will find opportunities for savings in cost and/or improvement in coverage.

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Angelo G. Viticone, AB;MT.
Director

Ascanio Di Pippo, Ph.D.
Biochemistry

ing labor costs. Medicare, MediCal, and Blue Cross of Southern California will each be responsible for a part of the incentive payment, the share for each to be based on the ratio of the respective program's patient days to total patient days.

The experiment will be carried out by the Commission for Administrative Services in Hospitals, which will work under general direction of Blue Cross of Southern California.

* * *

DOCTOR OVAR SWENSON CITED BY PEDIATRICIANS

Orvar Swenson, M.D., F.A.A.P., surgeon-in-chief, The Children's Memorial Hospital, Chicago, was named by the American Academy of Pediatrics to receive the 1969 William E. Ladd Medal of the Academy's Section on Surgery for his many accomplishments of outstanding merit in pediatric surgery.

The Award, presented during the Academy's annual meeting in Chicago in October, consisted of a gold medal. It is named for the late William E. Ladd, an honorary Fellow of the AAP, and a pioneer in pediatric surgery.

One of Dr. Swenson's many contributions to the field of pediatric surgery has been the establishment of the Swenson operation for the surgical correction of congenital intestinal aganglionosis (Hirschsprung's disease).

Dr. Swenson published the results of his work in 1948. Since that time, the Swenson operation has become an accepted method of surgical treatment in Hirschsprung's disease in many hospitals throughout the country.

Dr. Swenson, the author of a textbook on pediatric surgery, received his M.D. degree from Harvard Medical School in 1937. He was an Arthur Tracy Cabot Fellow at the Harvard Medical School from Nov. 1, 1941 to July 1, 1944. Dr. Swenson was an assistant in surgery at Harvard from 1942-44, and an instructor in surgery at Harvard from 1944-47. From 1945-50 Dr. Swenson was a surgeon at The Children's Hospital, Boston, Mass. He was surgeon-in-chief at Boston Floating Hospital for infants and Children from 1950-60. He is well-known to many physicians in Rhode Island where he has lectured before medical society and hospital staff groups.

* * *

MASS MAILING OF CREDIT CARDS OPPOSED

Mass mailing of credit cards has no mass appeal for the nation's independent business owners.

The practice of mailing credit cards to "everybody in the phone book," instead of only to those who request them or those with good credit histories, is frowned upon by the independents, says

(Continued on Page 658)

One of the best things you can do
for the cold sufferer



Ornade[®] Spansule[®]

brand of
sustained release capsules

Trademark

Each capsule contains 8 mg. of Teldrin[®] (brand of chlorpheniramine maleate); 50 mg. of phenylpropanolamine hydrochloride; 2.5 mg. of isopropamide, as the iodide.

Prompt relief from nasal congestion and hypersecretion due to colds.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

Contraindications: Glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal or bladder neck obstruction.

Precautions: Use cautiously in the presence of hypertension, hyperthyroidism, coronary artery disease; warn vehicle or machine operators of possible drowsiness.

Usage in Pregnancy: Use in pregnancy, nursing mothers and women who might bear children only when potential benefits have been weighed against possible hazards.

Note: The iodine in isopropamide iodide may alter PBI test results and will suppress I¹³¹ uptake; discontinue "Ornade" one week before these tests.

Adverse Reactions: Drowsiness; excessive dryness of nose, throat or mouth; nervousness; insomnia.

Other known possible adverse reactions of the individual ingredients: nausea, vomiting, diarrhea, rash, dizziness, fatigue, tightness of chest, abdominal pain, irritability, tachycardia, headache, incoordination, tremor, difficulty in urination. Thrombocytopenia, leukopenia and convulsions have been reported.

Supplied: Bottles of 50 capsules.

One capsule q12h for round-the-clock relief

SK
&F

Smith Kline & French Laboratories

THROUGH THE MICROSCOPE

(Continued from Page 656)

the National Federation of Independent Business.

This technique has been used by banks in promoting their credit card plans and by some major oil companies.

Credit never came so easy. Too easy, say critics of mass credit merchandising, including Representative Richard Ottinger of New York, who has introduced a bill to prohibit entirely the mailing of unsolicited credit cards. Independent businessmen polled by the National Federation of Independent Business concur; 80 per cent endorse this action, which supports the position taken by the Nixon administration, only 16 per cent object, and 4 per cent have no opinion.

In Rhode Island, 74 per cent favor the restriction, 21 per cent are against it, and 5 per cent are undecided.

The bill to amend the U.S. mail regulations carries a \$10,000 fine for a violation.

The businessmen's strong stand against unsolicited credit card mailings comes despite the fact that many independent retailers are participating in bank credit card plans. The Federation's continuous field survey shows that 35 per cent of the retailers make credit card sales and do 18 per cent of their volume on them.

Many small retailers find this preferable to carrying accounts themselves, and it gives them "easy credit" to rival the big stores' revolving credit plans.

Nevertheless, four out of five independents want to see Representative Ottinger's bill become law. Many unsolicited cards are lost or stolen which can result in a person being billed for charges he did not incur on a credit card he did not ask for and never received. A legal cloud hangs over such situations.

Banks claim more screening of mail lists has reduced such problems.

Fundamentally, too, many businessmen believe that credit should be granted only to those who

ask for it and have demonstrated they will make good on their obligations. Many complain of the many "deadbeats," the problems of collecting past-due accounts and the ease of bankruptcy.

Some independents are alarmed at the magnitude of consumer credit, nearly \$100 billion in short-term debt, and fear possible economic collapse if uncollectibles mounted. Mass mailing of credit cards — which has increased consumer debt sharply — is reprehensible, in this view.

* * *

"EXPANSIONIST" PHILOSOPHY FOR SOCIAL SECURITY DISCUSSED

"If the 'expansionist' goal for increasing the level of Social Security benefits is achieved, the direct effect would be the elimination of most private sector efforts in the economic security field and a significant effect on the national economy."

This warning was issued in Houston Texas, September 10, 1969 by Robert J. Myers, chief actuary, Social Security Administration, Washington, D.C., in remarks to the 1969 annual convention of The National Association of Life Underwriters.

Speaking as an individual and not as a Social Security official, Mr. Myers emphasized that if those who believe Social Security should be predominant, or virtually monopolistic, in the economic security field prevail, private insurance and savings would be greatly reduced.

"This, in turn, would result in a shortage of investment funds for private industry to maintain and expand its economic-productivity activities," he said. "Accordingly, private industry would have to turn more and more to the government for such funds, and this could well mean increasing governmental regulation, control, and even ownership of productive activities."

Mr. Myers noted that Social Security has operated in the more than three decades of its existence on the premise that it should provide a basic floor of protection on which individuals can build through their own efforts.

"The level of benefits and the maximum amount of earnings taxable have increased in terms of dollars, but — as is really significant — not to any extent relative to the trend of prices and wages," he said. "The Executive Branch has almost without exception carefully safeguarded the financial position of the program by attempting to assure that sufficient funds would be available to meet future costs, not only in the next few years, but also in the long run. Congress, too, has considered financial soundness to be of the utmost importance.

"Furthermore, Congress has been deeply concerned about maintaining the floor-of-protection concept. Frequently, when Congress considered

(Continued on Page 660)

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"All Interns are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards; they all are underpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* in-

volving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to stay strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.



Mild ulcerative colitis may be triggered here...



In mild ulcerative colitis, a number of factors can precipitate an attack: for instance, dietary indiscretion, such as eating raw foods, or emotional overreaction, such as that aroused by financial difficulties. No matter what causes the patient's sensitive colon to "act up," he soon suffers from acute discomfort...and often, from anxiety and apprehension as well. Such patients frequently respond well to adjunctive dual-action Librax® therapy.

Librax combines, in a single convenient capsule, the well-known antianxiety effect of Librium® (chlordiazepoxide HCl) and the dependable anticholinergic / antispasmodic effect of Quarzan® (clidinium Br). Therefore, as Librax helps to relieve the patient's excessive anxiety and reduce his overreaction to stress, it also,

at the same time, helps to control hypersecretion and hypermotility, thus relieving spasm and abdominal discomfort.

With Librax, the dosage schedule is simple: 1 or 2 capsules, t.i.d. or q.i.d., will in most cases bring the patient significant relief of both the emotional and physical elements that contribute to his psychovisceral disorder.

Before prescribing, please consult complete product information, a summary of which follows.

INDICATIONS: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

CONTRAINDICATIONS: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide HCl and/or clidinium bromide.

WARNINGS: Caution patients about possible

combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibitory effect on lactation may occur.

PRECAUTIONS: In elderly and debilitated patients, limit dosage to smallest effective amount to preclude development of ataxia, oversedation, confusion (not more than two capsules per day initially; increase gradually as needed and tol-

or here.



ed). Though generally not recommended, if combination therapy with other psychotropics is indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and enothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

ADVERSE REACTIONS: No side effects or manifestations not seen with either compound have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These

are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver-function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diet.

two good reasons for prescribing **LIBRAX®**

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.



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No place for beginners

Terramycin[®] (oxytetracycline)

An infection of rapid onset requiring prompt attention. Teenage girl with chills, fever, abdominal pain, backache and nausea. Frequent and urgent urination with burning. On examination—tenderness over kidney. Blood count and urinalysis confirm the diagnosis: acute pyelonephritis. Treatment is initiated with Terramycin. Within a few days of follow-up therapy, the patient is markedly improved. The pretreatment urine culture shows a strain of *E. coli* highly susceptible to Terramycin.

Experience has shown that Terramycin offers special advantages in treating urinary tract infections when strains of causative bacteria are susceptible. Broad-spectrum coverage unaffected by penicillinase. Effective tissue levels to help reach foci of infection in renal parenchyma. High urine levels—excreted by kidney in *active* form.

With Terramycin, you have the assurance that comes with choosing an agent physicians have depended on for over 18 years. In difficult as well as routine cases, when tests reveal susceptible organisms, consider Terramycin. One of the world's most widely used broad-spectrums.

Contraindicated: In individuals hypersensitive to oxytetracycline.

Warnings: Reduce usual oral dosage and consider antibiotic serum level determinations in patients with impaired renal function.

Use of oxytetracycline during the last trimester of pregnancy, neonatal period and early childhood may cause discoloration of developing teeth. This effect occurs mostly during long-term use of the drug, but it has also been observed in usual short-treatment courses.

During treatment with tetracyclines, individuals susceptible to photodynamic reactions should avoid direct sunlight; if such reactions occur, discontinue therapy.

Note: With oxytetracycline, phototoxicity is unknown and photoallergy very rare.

Precautions: Use of broad-spectrum antibiotics occasionally may result in overgrowth of nonsusceptible organisms. Where such infections occur, discontinue oxytetracycline and institute specific therapy. Increased intracranial pressure in infants is a possibility. Symptoms disappear upon discontinuation of therapy.

Adverse Reactions: Nausea, diarrhea, glossitis, stomatitis, proctitis, vaginitis and dermatitis, as well as reactions of an allergic nature, may occur but are rare.

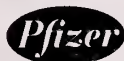
Supply:* Terramycin Capsules: oxytetracycline HCl, 250 mg. and 125 mg. Terramycin Syrup: calcium oxytetracycline, 125 mg. per 5 cc. Terramycin Pediatric Drops: calcium oxytetracycline, 100 mg. per cc.

*All potencies listed are in terms of the standard, oxytetracycline.

More detailed professional information available on request.



Terramycin[®] (oxytetracycline)



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660

THROUGH THE MICROSCOPE

(Continued from Page 658)

recommendations of the Executive Branch, the proposals were amended or re-written so as to moderate them considerably. Seldom has Congress passed legislation exceeding a President's proposals.

"Not everybody believes that Social Security should be only a basic floor of protection, although, in my opinion, most people hold this view. Employers and workers are quite willing to pay the Social Security taxes to provide this floor of protection against basic economic risks. But there is considerable question, especially among younger workers, as to whether this tax cost should be drastically increased to expand the program fully and at the same time parallel efforts in the private sector."

... Reprinted from *Insurance Economic Surveys* of the Insurance Economics Society of America. Vol. 26, No. 3. September 1969

* * *

DID YOU KNOW?

- There's no health insurance policy yet that *specifically* provides coverage for a heart transplant operation.

- Insurers say most medical men consider this procedure experimental. Health insurance is designed to pay for proven medical treatment.

- Insurance authorities believe that when heart transplants are no longer considered experimental, they will then be insurable.

- Many insurance companies today offer policies for more widely-accepted new operations such as kidney transplants.

- In anticipation of insuring high-cost hospital procedures, at least one insurance company has announced coverage to pay unlimited medical benefits toward organ transplants after all available benefits are paid through that company's major medical or basic health insurance.

- Even today, most major medical policies will pay for at least some expenses incurred through heart transplant surgery. Most hospital policies will pay in their area of expense protection, too.

- To date, hospital bills alone run upward of \$20,000 per heart transplant. One medical educator estimates the total cost at about \$50,000.

- Major medical policies commonly provide maximum benefits of \$10,000 to \$15,000 of specified health care expenses.

- Many new major medical plans are being geared to handle even the most expensive procedures with maximums ranging from \$20,000 to \$50,000 and several labor-management negotiated contracts going as high as \$100,000.

(Continued on Page 662)

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MEDICAL BUREAU
of the
Providence Medical Association

THROUGH THE MICROSCOPE

(Continued from Page 660)

STATE AID TO MEDICAL SCHOOLS

State governments contributed \$142 million to the support of U.S. medical schools for the year 1966-67; 46 public schools received \$129 million in state appropriations and 8 private medical schools received \$12 million in state subsidies. Pennsylvania contributed \$10 million to the 6 private schools in the state. Florida and Kentucky contributed \$2 million to the private schools in those states. Eight schools (6 public, 2 private) received \$825 thousand in state funds channelled through three regional education programs: The New England Board of Higher Education, the Southern Region Education Board, and the Western Interstate Commission on Higher Education. Table I presents the contributions each program made to medical schools in 1966-67. States participating in the regional programs agree to make an annual payment per student to schools elsewhere within the region for each of a specified number of students. In turn, the students are not charged the additional fees paid by nonresidents.

TABLE 1
Regional Education Programs Contributions to Medical Schools 1966-67

Program	Number of Students	Annual Contributions Per Student	Total Contributions
New England Board of Higher Education	110	\$2,500	\$275,000
Southern Regional Education Board	147	2,000 ¹	294,000
Western Interstate Commission for Higher Education	128	2,000 ²	256,000
Total	385		\$825,000

¹Annual contributions per student increased to \$2,500 after FY 1967.

²Annual contribution per student increased to \$3,000 after FY 1967.

State aid or subsidies differ from state appropriations for support of the medical schools in that they are outright payments (usually made to private rather than public schools) which may be applied to the general budget of the college without restrictions. State aid to medical schools, other than regular support of state-sponsored schools, was the subject of a survey made by the Association of American Medical Colleges in 1969. The medical colleges were asked if they received state subsidies on the basis of the number of residents and nonresidents of the state enrolled as medical students. Of the 89 schools reporting, 23 either receive or are eligible to receive some form of aid from state sources, excluding regular support of

state-sponsored schools. Eight participate in regional education programs; 15 participate or are eligible to participate in state supported subsidy programs. Of these 15 colleges, 4 reported that state aid is extended only on behalf of residents of the state; 7 receive state support for both residents and nonresidents. Four of the medical schools eligible to participate did not report in the survey (Table 2).

Table 3 presents the formal aid programs of 5 states which support medical colleges. At present, 6 states have proposals for support of private schools under active consideration: Delaware, Illinois, Minnesota, Missouri, North Carolina, and Wisconsin.

... Reprinted from *Datagrams*, Vol. 11, No. 4, October 1969, published by the Association of American Medical Colleges.

TABLE 2
Number of U.S. Medical Schools Receiving State Aid for Enrolled Students

Restrictions on State Aid	Number of Schools
1. State aid restricted to state residents	4
2. State aid restricted to nonresidents	8
3. State aid extended to residents & nonresidents	7
Schools reporting state aid	19
Schools eligible for state aid but not reporting	4
Total schools receiving or eligible to receive state aid	23
Schools not receiving state aid	70
Schools not reporting	10
Total schools	103

TABLE 3
Programs of State Aid to Medical Schools

State	Program
Florida	\$4,500 to "the first accredited and approved medical school for each year a legal resident of Florida is enrolled."
New York	1) \$2,000 for each M.D. or Ph.D. degree awarded beginning September 1969. 2) \$6,000 per medical student per year above average number enrolled between 1962-67. Minimum increase—5 admissions. Maximum increase—25 admissions. No residency restriction.
Ohio	\$4,800 per full-time equivalent in medical school. \$5,100 proposed for 1970.
Pennsylvania	Amount negotiated annually on basis of expenditures and enrollment. 1969 varied from \$3,700-\$3,900 per student.
Kentucky	A subsidy is provided to the University of Louisville School of Medicine but not on a per capita basis.

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—Current Therapy 1967, ed. by Conn, H. F., P. 88—

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Children: Under 1 year: 1/4 teaspoonful every 12 hours.
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**His heart tells him he's an invalid.
You know he's not.**

Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis,

badubdub lubadub

xiety is expected in the cardiovascular patient. A little may even be desirable.

When anxiety is exaggerated . . . when it interferes with sleep . . . when it aggravates cardiovascular symptoms, your help may be needed.

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and perhaps prescribe Equanil (meprobamate) as adjunctive therapy. It helps relieve anxiety and tension specifically, yet gently.

Most 15 years' use has shown that Equanil is usually well tolerated as well as effective. Side effects are generally limited to transient drowsiness; serious, therapy-interrupting side effects are rare.

stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

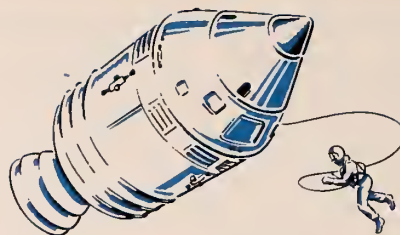
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HEALTH COST EFFECTIVENESS AMENDMENTS

Summary Review of Provisions of Health Cost Effectiveness Amendments of 1969 To Be Introduced as Social Security Act Amendment

Section 1 states the title of the bill to be "Health Cost Effectiveness Amendments of 1969."

Section 2 deals with state planning, providing for the disallowance of depreciation and/or interest on funds borrowed as an item of the facilities reimbursable cost formula, if the facility, in making capital expenditures, has failed to receive approval from the state health planning agency established under the Comprehensive Health Planning Act.

Section 3 deals with institutional planning and requires as a condition of participation in medicare, that provider institutions have a written three-year plan consisting of an operating budget and a capital expenditures budget.

Section 4 enlarges on the provision of the 1967 amendments which presently gives authority to the Secretary to approve the conducting of incentive reimbursement experiments under medicare directly or through grants to public or nonprofit private agencies, institutions and organizations. This section also requires participation of all institutions and organizations in an area in the proposed experiment where the Secretary of HEW determines that such participation is necessary to successfully carry on the experiment. Those required to participate, and who refuse to do so, could be cut out of the program. This requirement would not apply if 20 per cent or more of those who would be involved in the experiment refuse such participation on the basis that it would cause them undue hardship.

Section 5 gives the Secretary authority to discontinue payments under the medicare, medicaid and maternal and child health programs if the provider: (a) makes false statements in application for payment; (b) fails or refuses to provide information necessary to substantiate the request for payments or refuses to permit examination of fiscal and other records as may be necessary to verify such information; (c) has submitted bills for services rendered which are substantially in excess of his customary charges for such services; or (d) has furnished services or supplies "determined by the secretary . . . to be substantially in excess of the needs of the patients, or harmful to them or of a grossly inferior quality." In order for "c" or "d" to apply, a medical review team must concur in the Secretary's determination. The medical review team is to be appointed by the

Secretary after consultation with state and local professional societies and with the carriers, and is to be composed of physicians and other professional personnel in the health care field.

Section 6 provides for the situation where a hospital, extended care facility or home health agency may be charging regular patients less than its "reasonable cost" as determined or computed under the medicare reimbursement formula (for example, a richly endowed institution). Under these circumstances, the law would require the lower cost to be the one charged to the medicare program.

Section 7 amends and expands the present utilization review requirements for hospitals and extended care facilities so as to provide that where the committee determines that a patient's admission to the hospital or the furnishing of particular professional services to him is medically unnecessary, payments would be terminated. Note: In discussing this provision with HEW, it appears that the decision of the utilization review committee would be retroactive to the time of the patient's admission and payment for hospitalization or extended care services would be disallowed if the committee finds the inpatient services or admission to have been medically unnecessary.

Section 8 makes more explicit the Secretary's authority in those instances when he finds that more than the correct amount has been paid to a provider of services, or to other persons for services or items furnished an individual, to recover that excess amount. He could recoup the excess by decreasing subsequent payments to which the provider is entitled or by requiring a direct refund.

... Reprinted from *Legislative Roundup*, issued by the Council on Legislative Activities of the American Medical Association.

NOTE: In discussing this draft legislation with the AMA Council on Legislative Activities, Health, Education and Welfare representatives stated that they recognized that it contained potential problem areas for hospitals, extended care facilities, home health agencies, physicians and other providers of care. They also recognized the administrative problems which the bill would generate for them and for the carriers. The Council on Legislative Activities was assured of HEW's willingness to discuss this proposal with Medicine and to make whatever changes they could within the framework of its intended purposes. At the present time, the bill is under careful study by the Association.

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Tybatran (tybamate) has been used with benefit in the treatment of depressive symptoms associated with anxiety and other symptoms of psychoneuroses. However, it is not indicated for primary treatment of depressive states. It is not an antipsychotic agent, although it has been used as adjunctive therapy in some psychotic patients.

Dosage: One 350 mg. capsule, 3 times daily and two at bedtime is suggested as the adult starting dose. Adjust to suit individual requirements. Daily doses above 3000 mg. are not recommended.

Contraindications: Known hypersensitivity to tybamate. Since no studies have been done with this drug in human pregnancy, it should not be used in pregnancy unless the potential benefit outweighs the risk.

Warnings: Administer cautiously to patients receiving phenothiazines or other CNS depressants or having history of convulsive seizures (See Adverse Reactions). Consider possibility of additive actions with alcohol or other psychotropic agents, particularly phenothiazines or MAO inhibitors.

Precautions: Avoid abrupt withdrawal after prolonged use, although withdrawal symptoms have not been reported to date. Exercise caution in addiction-prone individuals. If symptoms of hypersensitivity occur, discontinue at once and initiate appropriate symptomatic treatment. Avoid activities requiring optimal mental alertness if drowsiness or vertigo are present. As with any new drug, use cautiously in patients with history of drug allergies, blood dyscrasias, and hepatic or renal disease; periodic measurements of hepatic, hematopoietic and renal function should accompany prolonged and/or high doses.

Adverse Reactions: Most frequent reactions, rarely requiring discontinuation of tybamate, include drowsiness, dizziness, nausea, insomnia, and euphoria. There have been a few reports of skin rash, urticaria, and pruritus. Rare side effects include hyperactivity, fidgetiness, flushing, and tachycardia, suggesting excessive stimulation; also ataxia, unsteadiness, confusion, feeling of unreality, "panic reaction," fatigue, headache, paresthesias, vertigo, gastrointestinal disturbances, glossitis, and dry mouth. Grand mal or petit mal seizures have been reported in a few hospitalized psychotic patients receiving tybamate (up to 6000 mg. daily) together with phenothiazines and other psychotropic agents, but not with tybamate alone. Consider the possibility of rare, serious adverse reactions such as may occur with the related drug, meprobamate. If excessive amounts are ingested, gastric lavage and symptomatic therapy, including central stimulants as necessary, are recommended. Before prescribing, consult package circular.

Supply: Tybatran (tybamate) is available in green, sealed capsules of three strengths: 350 mg., 250 mg., and 125 mg. Each strength is supplied in bottles of 100 and 500.

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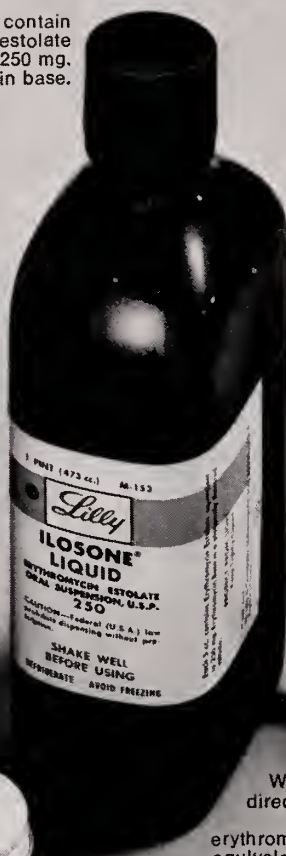
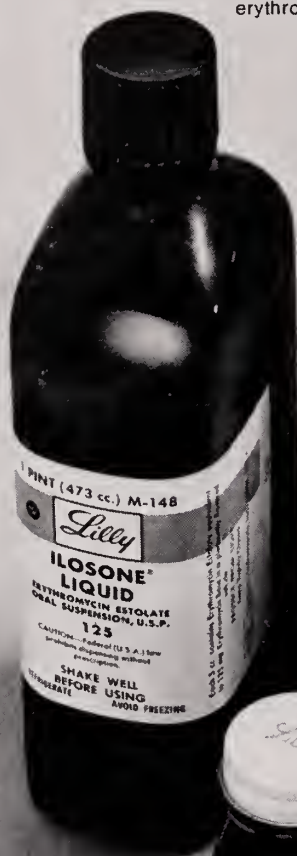
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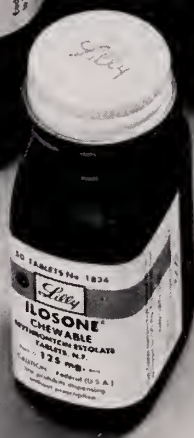


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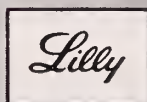


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THE PHYSICIAN AND THE SURGEON^{1*}

"In A Word, One Must Be Familiar With Both Departments Of Medicine"

"Why, in God's name, in our days is there such a great difference between the physician and the surgeon? The physicians have abandoned operative procedures to the laity, either, as some say, because they disdain to operate with their hands, or rather, as I think, because they do not know how to perform operations. Indeed, this abuse is so inveterate that the common people look upon it as impossible for the same person to understand both surgery and medicine. It should, however, be understood that no one can be a good physician who has no idea of surgical operations, and that a surgeon is nothing if ignorant of medicine. In a word, one must be familiar with both departments of Medicine."²

"No one can be a good physician who has no idea of surgical operations, and a surgeon is nothing if ignorant of medicine." This, gentlemen of the College, is my chosen theme, and lest you think it a novelty of my own I hasten to add that the paragraph quoted is transcribed from writings which exist for us only in manuscript, since Lanfranchi, called the father of French surgery, who expressed this sentiment, lived two centuries before Gutenberg.

When one considers the healthy unification of Hippocratic medicine, why *was* there such a difference in Lanfranc's time, and must we admit that the difference he lamented still exists in ours? Does the shadow of the medieval schism dividing medicine and surgery and both from the church, which originated, history tells us, in a thirteenth-century papal decree forbidding the participation of the

HARVEY CUSHING, M.D., F.A.C.S.
of Boston, Massachusetts.

clergy in any procedure involving the shedding of blood — does the shadow of this schism still lie upon us? What difference, after all, is there between physician and surgeon except in the kind of cases each of them chooses to treat and in the variety of therapeutics applied? And in view of many centuries of separation, do we tend toward reunion or further separation? These are questions which concern in no small degree the very existence of this College.

THE PHYSICIAN'S PROGRESS

We certainly have stumbled along widely divergent therapeutic ways, we lay physicians and lay surgeons. The great physicians of ancient days were first of all given over to a polypharmacy inherited from the Arabians, then to the Law of Signatures with its astounding botanical therapeutics, then to a period of heroic bleedings and purgings and sweatings. Homeopathy followed, and taught the profession a much-needed lesson, and finally cellular pathology and bacteriology came to revolutionize physic by arousing a profound skepticism in regard to the efficacy, whatever the dose, of most of the drugs abundantly prescribed for symptomatic purposes. This gave to the traditional practices a staggering blow, and the coal-tar products with synthetic chemistry finally closed the physic-garden, drove plants with a few notable exceptions from the pharmacopoea, and botany from the curriculum.

While all this was going on, much time was spent in evolving "systems" of therapeutics based upon bizarre interpretations of pathology which followed one another in succession, the Brunonian doctrine being one of the last, whereby diseases were either sthenic or asthenic; and a century and a half later we still hear "asthenic states" spoken of as ones which need supporting treatment by alcohol, so that even in these dry days the physician is privileged to prescribe the drug that was Brown's personal undoing, though he lived north of the Tweed.

(Continued on next page)

¹Presidential address before the American College of Surgeons, at Boston, Massachusetts, October 27, 1922.

²Cf. Henry E. Handerson's *Gilberius Anglicus*. Privately printed. The Cleveland Medical Library Association, 1918, 77 pp.

*Reprinted with permission from *SURGERY, GYNECOLOGY AND OBSTETRICS*, 35:701, 1922, to commemorate the 100th anniversary of the birth of Harvey Cushing, M.D., on April 18, 1969.

It is an old saying that the wisest physician is he who knows the uselessness of the most medicines. Nevertheless, in an unfortunate alliance with the apothecaries, at about the time the surgeon was entangled with the barber, the eighteenth-century physician was accustomed to write prescriptions for patients he hadn't seen, while enjoying good company in the coffee-house. Some measure of common sense in matters therapeutic was finally knocked into the profession by the growing appreciation of the self-limitation of many diseases, by the success first of Hahnemannism, and, later of other cults like Mother Eddy's which revived the therapeutic importance of a neglected principle well known in the Æsculapian temples—the influence of the mind upon body ailments, particularly when imaginary in large part, as so many of them are. Mr. Dooley once sagely remarked that "if the Christian Scientists had a little more science and the doctors more Christianity it wouldn't make much difference which you called in — provided you have a good nurse." And there is no doubt but that Florence Nightingale and her successors have also had much to do with modifying our modern therapeutics.

But the profession has not entirely regained its therapeutic sanity under these benign influences. Those uncritical and poorly-trained physicians who live in glass houses and give welcome to the prescriptions of certain pharmaceutical establishments which elbow their way to our desks on leaflets and postcards, cannot throw stones at the laity who give no less a welcome to nature-healers, herbalists, chiropractors, bone-setters, patent-mediciners, and other charlatans beyond enumeration. Little wonder that the wiser heads, both lay and professional, have about come to the conclusion that we had better limit the number of students in our schools, and let a smaller number, better trained, devote themselves to the prevention of disease through public-health measures, keep the bulk of the community well in spite of itself, in much the same way that we protect our live stock.

THE SURGEON'S PROGRESS

While all this has been going on through the centuries, in physic, the surgeon was pursuing an entirely different way, independent of tradition and for the most part, be it said, in rather bad company. A handicraftsman, often a rude, uncultivated, and ignorant though practical fellow of itinerant proclivities, he was rarely utilized in the schools, and when so employed, merely as the tool of the more learned and socially more respected physician. He had broken away from established authority: he ventured to write in the vernacular, and sometimes to operate without the physician's permission. Indeed, he did many unorthodox things.

However, he was greatly needed especially in time of war, as Charles V used Vesalius; as four successive Bourbons used Paré; Elizabeth, William Clowes; Charles I, Richard Wiseman; and to give an example from more modern times, as Napoleon used Larrey. Thus he came to be respected at court, even though he was kept out of the faculties where he was looked upon with scorn not untinged with jealousy. An outcast both of church and profession, he finally climbed into professional and some measure of social esteem about the middle of the eighteenth century by way of the barber-pole. But his long and quarrelsome alliance with the Guild of Barbers, humiliating enough, was peaceful when compared with the quarrels of the physicians and apothecaries.¹

¹Sir William Stokes in his Cavendish Lecture entitled "The Altered Relations of Surgery to Medicine" (Tr W. Lond. Med.-Chir. Soc., 1888, iii, 126-7), wrote as follows:

"... In the interests not only of the social, but also the scientific position of the surgical profession, the junction, such as it was, of these two corporations (the Surgeons' and the Barbers' Company) was undoubtedly a calamity, and it helped to give the physicians the vantage-ground which they occupied so long, and in which they were still further strengthened by an enactment made in Elizabeth's reign, prohibiting surgeons from prescribing internal medicines. As a proof that the inferior position, socially and scientifically, was maintained up to a comparatively recent period, I may mention as a fact which I learned from Mr. Colles, who informed me that his father, Abraham Colles, had stated that at the commencement of his professional career in Dublin, when a consultation on any important case was held, the surgeon was not as a rule permitted to be in the room where the physicians held their deliberations, but, after the consultation was over, he was informed whether his services would be required or not."

A short century after the surgeons succeeded in breaking away from this alliance with "barbary" and were readmitted into the schools on the same footing as the physician, there came Lister on the heels of Pasteur, to revolutionize, not only surgical therapeutics, but at the same time, by the introduction of surgical cleanliness, the very hospitals in which both physic and surgery are practiced. And so it has come about that while the physician today has busied himself in perfecting elaborate methods of diagnosis for many chronic disorders, he rather shrugs his shoulders over therapeutics, whereas, on the other hand, treatment by operative methods has developed amazingly, and there is no gainsaying that in the hands of some it tends to run away with itself as a therapeutic measure.

REUNION OF PHYSICIAN AND SURGEON

Thus, in very rough outline, the two main clinical branches of Medicine, long separated both socially and professionally, have grown in ways so divergent that the fact of their origin from a com-

mon stem has become obscured by an accumulation of therapeutic debris left by a succession, on the one hand, of theorists who, like the modern endocrinologist, may perhaps see the patient as a whole but through a mist, and by the modern surgical specialist who sees only a part, but that part so disproportionately he is tempted to remove some of it.

Should these therapeutic groups be allowed to riot in their growth unmolested, branching in all directions at will, or will they bear better fruit if grafted or fertilized or cut back remorselessly? All agree that the time is at hand at least for some judicious pruning both in physic and surgery, and for the removal of sufficient rubbish to permit the main stem of Medicine and its roots of Science to be properly exposed and aerated. This process will be good for both root and branch, but more particularly will it benefit the branches if it has the effect of making the surgeon less of a pure technician and more of a physician, and the physician more capable of utilizing some of the minor procedures of surgery and with a better understanding of the major ones.

"In a word, one must be familiar with both departments of Medicine," and this is no less true today than in the thirteenth century or in the days of Hippocrates. By no means did Lanfranc, in the statement which has been quoted, mean to imply that physicians must practice surgery — merely that they will be better physicians, the better their understanding of surgical therapeutics; and, on the other hand, that no surgeon should be regarded as qualified to undertake operative procedures who is not primarily and thoroughly grounded in medical diagnosis. A graduate in medicine may have a very wide knowledge of surgery or even be a successful teacher of the subject without necessarily being himself an operator, just as one may have a thorough knowledge of music without being a performer. So, also, there may be many activities in which a physician may engage, beneficial to his profession, without necessarily "practicing" or prescribing drugs.

However, when in common parlance we differentiate physician and surgeon we do so only on the basis of therapeutics, and, granting the same underlying knowledge of disease, this is all that separates from medicine proper, homeopathy and osteopathy and all the other therapeutic cults, each of which reaches some degree of sanity so soon as it undertakes to perform surgical operations, as in time it is inevitable each one of them should do. There is nothing homeopathic about the scalpel, and when surgery was permitted to creep into this doctrinaire school it was near its end. The osteopath and chiropractor and eclectic and all the others may beware of this, for so soon as they

come to engage in surgery, then a thorough medical grounding will be necessary, so that the natural end of all such cults is, that, dead or alive, they will become swallowed in time by the general profession, distasteful as the dose may be.

METHODS OF TEACHING

Unquestionably, what chiefly influences the direction of its growth is the way in which Medicine as a whole is taught — the way in which its various subdivisions are presented to the student, and the relative stress laid upon them. Whatever their spirit of altruism, most of our students enter the profession as a means of livelihood, and are likely to be influenced by what seems to them, given an ordinary degree of ability, to be the most likely road to an income-producing end, whether it be as a laboratory worker, or public-health official, or physician, or surgeon, or specialist of any sort. A disproportionate amount of teaching, or better and more personal teaching in one subject over another, whereby the student's interest is aroused and he begins to feel a certain amount of confidence in his knowledge, will inevitably lure in that direction the larger number.

The periodical turnover in our curricula is an evidence of the fact that faculties show a perennial dissatisfaction with existing conditions, and strive each of them to find the proper average allocation of subjects; little realizing that it makes no great difference — that the fault lies with us the teachers, not with the curriculum, for Medicine can be successfully taught from many angles if only students are properly stimulated and encouraged to observe and think and do for themselves. But what has become particularly apparent of late, is that the curricular tree has become overloaded by grafting upon the clinical branches an undue profusion of specialties, few of them of fundamental importance even though they doubtless bear fruit of marketable value which dangles before the student's eyes so alluringly that he is prone to forget, or to overlook entirely, the source of origin of the specialty in general Medicine.

There has been a great reaction against this, and our supposedly more progressive schools are engaged in lopping off a number of these clinical branches. Some schools, indeed, have come to pay so much attention to the root and stem that if we do not beware the top will be cut back so far that there will be neither foliage nor fruit — no medical practice whatsoever — and thereby encouragement will be given to the growth of every conceivable form of quackery which will spring up around us as have the schools of the chiropractor, to fill the depleted ranks of the profession; and the indifferent public is probably worse off than it was before.

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Reforms are often necessary, but there are no schools for reformers. They, like the physicians of the Middle Ages, are inclined to administer such drastic treatment that the object of the reform, whatever it may be, relieved of the existing ailment, is left subject to other and more serious ills. Much needed as he is, the reformer rarely advocates homeopathic doses or gives a chance for the malady he would correct to be overcome by natural processes. So far as our diminishing supply of family doctors is concerned, there are many who have come to feel that it would be better for us to send out after two years of clinical study alone, with some additional knowledge of public health, a group of men to be licensed as Bachelors of Medicine. They at least could attend to the ordinary ailments and health of the rural districts, where public opinion is largely made and from which legislation, detrimental or otherwise to the interests of the profession in its campaign for sanitary measures, is likely to emanate.

TEACHING WITHOUT THE PATIENT

It is a curious commentary on our methods, that while we have come to emphasize the importance of teaching the preclinical sciences by practical laboratory exercises so that the student may at least have some first-hand knowledge of the scientific method and may learn to interpret and observe for himself, we have tended, if not to abandon, at least to postpone, to the end of the course, these very methods so far as the clinic is concerned. To be sure, we have long outgrown the time-honored quiz as the basis of teaching, than which nothing could have been less practical. A student may know his textbook thoroughly, may, for example, give without hesitation, when asked for them in an examination, all the symptoms of that vanishing disease typhoid fever, but if he has to utilize his own observation, senses, and wits, and dig out, himself, the essential symptoms and signs which make the diagnosis possible, he is so incapable of reversing his acquired mental processes that the idea of typhoid fever never enters his bewildered head. Only by prolonged contact with the patient at the bedside can he come to take a good history, to make a proper examination, to learn to separate the wheat from the chaff of the patient's complaints; all of which must precede the interpretation and the treatment of the existing disorder.

The so-called case system of teaching has become highly developed and popularized in certain schools — a diagnostic exercise whereby through the process of elimination and logic the predigested data acquired by a variety of people is presented for discussion and analysis. Such a method is excellent for training in the law, since in the legal profession one argues on the basis of authority and

accumulated testimony, in accordance with which satisfactory judgments can be rendered and punishments meted out without even seeing the culprit. But the medical profession has long since broken away from dogma and authority, and though the case system, handled by a lively instructor, provides an interesting exercise in medical diagnosis far superior to the old-time quiz, when carried far, it has the great danger of making logicians of the students, rather than practical physicians. There is some danger lest the student be led to feel that it is unnecessary, for a diagnosis, to examine the patient oneself — someone may get the history, another make a physical examination, still others supply the X-ray findings, the laboratory tests, and so on, while all that the modern physician needs to do is to sit and expound as did the medieval anatomist while the barber did his dissections for him. Excellent as they may be, there is nothing practical about such exercises, and if overemphasized they are bad for both teacher and student — for the teacher because he gets out of the habit of making his own thorough examination of the patient; for the student, who gets an impression that the diagnosis, which an autopsy may confirm or otherwise, is the only thing of importance, and treatment for the most part futile. Meanwhile the patients in their homes, in the dispensary, even those in the wards, would like to know what these professors who admittedly are having difficulty in telling without looking at the organs, what certain people died from, are going to do to relieve their individual backaches or troublesome coughs — and perhaps it would be just as well to go to a chiropractor next time. Indeed, it takes a good deal of explaining to make clear that a lumbar puncture, bismuth studies under the fluoroscope, a blood urea examination, metabolism observations, Wassermann tests, and electrocardiograms made by as many different people, most of them technicians at that, each in their several laboratories — that all these things are necessary preliminaries to the recognition of his malady. All too often, alas, the knowledge thereby gained fails in any way to make him more comfortable, or to prolong his expectation of life. The patient submits to all this and is very glad to know, in the abstract, that diagnosis has become a laboratory science which employs the modern principle of piece-work, and that the medical profession looks forward to the prevention of many existent diseases from which posterity will be exempt — but “meanwhile, doctor, what can you do to relieve my present discomforts so I may get back to work?” He is inclined like the Irishman to ask, “What has posterity ever done for me?”

THE HOME-TRAINING IN MEDICINE

The curriculum in all of our schools still retains

one essentially practical clinical course to which attention may be drawn — a course forced upon us by boards of registration, else even this might be curtailed or lost. It exists in the case of obstetrics, for no student is allowed to get his degree unless he has actually, himself, supervised a certain number of confinements. Here is an actual test of the medical novitiate's resources, the one practical test of what he may be able to do in a possible emergency in a patient's home. Nor would any of us wish to see the students robbed of this invaluable experience. On the contrary, it would be an admirable thing if the principle could be extended and every student, before his graduation, required, under the control and supervision of his teachers or the district physician of the community, to engage in an actual house-to-house practice, armed perhaps with nothing more than a clinical thermometer, a stethoscope, his fingers, and wits, supplemented perhaps by a microscope and a few aniline dyes. In this way he might learn something at least of the living conditions which modify the health of the people he now only meets in the dispensary, surrounded by all of the paraphernalia and instruments of precision supposed to be necessary for a diagnosis. It is a leaf one might take from the book of certain training-schools for nurses whose candidates must prove their capacity to engage in actual home-practice before they can qualify for a degree. One of our highly trained young physicians, long-time resident in a teaching hospital, recently confessed to me that he had just been through one of the most valuable experiences of his ten years of medical study. He had passed his summer on an island where was a large summer community, and in the absence of any local physician he had volunteered to hold office hours and prescribe for the needs of his fellow-sojourners, his principal armament being a thermometer, his microscope, some bandages, and a few simple drugs. Never before had his powers of observation and his common sense been so thoroughly exercised.

THE SURGEON IN OTHER COUNTRIES

It is a curious anomaly that the British surgeon taken as a whole is probably in practical ways a better trained physician than is the American surgeon, and yet he rarely possesses a full medical degree and is apt to pride himself on not being called a doctor. Here, on the contrary, the surgeon though graduated a Doctor of Medicine, not infrequently lapses into the state of being little more than a craftsman who, except for the external parts of the body, makes little or no pretense at diagnosis but expects the "internist," often without any expression of an independent judgment, to show him the way.

Different countries — indeed different parts of the same country — vary greatly in the attitude of physician or surgeon toward their problems. This past summer, during an all-too-short service as *locum tenens* for Mr. George Gask at St. Bartholomew's Hospital, I have had a most illuminating experience which has left me with the impression that the British student gets a more practical clinical course, based upon far better training in anatomy and gross pathology than do most of our students, and that he is far less inclined to lean upon laboratory accessories in making his diagnosis. He, for a longer time and more intimately, is brought in contact with the 90 per cent of human ailments upon which complicated laboratory tests have no special bearing, and through practical experience is apt to arrive at a reasonably sound conclusion in regard to his patient's disorder and have a shrewd idea of the appropriate form of treatment. True, he may miss some of the more rare conditions, for which, after all, little can be done therapeutically — conditions which our students with their vastly better laboratory facilities, might recognize in all likelihood. But, should we put side by side at work in a small town the average products of these two methods of teaching, I am inclined to think that the former would be the more resourceful, and exercise greater wisdom though possessed perhaps of less learning. And, after all, the strength of a profession, as of a nation, is represented by its average product.

CARE OF THE MINOR AILMENTS

One looks in vain in the curriculum for a course on the common sense treatment of minor ailments. It has been said by a wise and philosophical lay observer of the profession that so far as he can see, the only difference between the so-called "practical" doctor and the "scientific" one who has had a thorough laboratory training, is that the latter is more likely to cure his patients. But with all personal sympathy for this point of view, the community, particularly its rural portion, still has an enormous need for the common sense practitioner, who for four undergraduate years, under careful supervision, has seen less of complicated laboratory methods and more of the handling of sick people afflicted with the common everyday minor injuries and maladies. Otherwise we shall utterly abandon this all-important work to quacks and charlatans, who may become very skillful at it, in spite of their chicanery. I am not at all sure but that, for most of our schools, some measure at least of the French system would be best, whereby from the very outset of their course medical students are brought in direct contact with patients, and the laboratory courses are given

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conjointly and possibly prolonged throughout the four years.

We must somewhere and somehow strike a middle ground between over-training in the laboratory and under-training at the bedside, or the reverse. Certainly at the present time our graduates — many of them at least — no longer feel that the role of the country doctor, or even the general practitioner in the town or city, is at all an alluring one, even a possible one, so dependent have they become on complicated laboratory findings in arriving at a diagnosis. Unquestionably, there is an economic element which also enters into this, for a training in Medicine at the present day is unduly long and expensive, entirely disproportionate to any possible returns to be gained from a rural practice.

STRESS UPON BIOLOGY RATHER THAN ANATOMY AND PATHOLOGY

The present stress laid in this country upon the preclinical laboratory courses, particularly those in chemistry and physiology, has without doubt greatly influenced the entire point of view of the physician, who must have a calorimeter and an electrocardiograph with a technician to operate them, if only to keep in fashion, little realizing that they are scarcely more than research instruments. There has been much talk about the modern physiological schools of physic and surgery, and I presume this means that it is less fashionable for the clinicians to grub in the pathological and anatomical laboratories than formerly. Anatomy and pathology just now appear to the unimaginative to have been thoroughly explored; the pioneers have taken the surface washings, and rather than dig deep for gold we prefer to look elsewhere for novelties and chance findings.

The interest of the students in these two particularly essential subjects has unquestionably flagged, for they naturally reflect the attitude of their teachers. There is no better illustration of this than the fact observed in many hospitals, that the physician is less apt than formerly to follow his patients to the operating room, and appears to be less eager than in days gone by to have a view, during life, of the pathological lesion. His place there has been taken by the radiographer who is more often on hand to see his diagnoses confirmed or otherwise. This may be for the reason that the disclosures at the operating table relate to regional pathology, and the surgeon rarely exposes lesions which will enlighten those interested in blood urea, the Wasserman reaction, calorimetric or electrocardiographic estimations.

THE PHYSICIAN-SURGEON

Does this not mean that the surgeon has become the internist, or, put another way, that the internist (as the physician was once called) has

come to do his own surgery? If this be so, it behooves the surgeon to accept the fact that he must be, primarily, a good physician — and the physician, loth as he may be to admit it, that he has undergone a metamorphosis. A year ago this College gave an honorary fellowship to the professor of medicine of the University of Stockholm, who had evolved an operative method, entailing great skill, whereby the adherent lung may be completely collapsed in the treatment of pulmonary tuberculosis. A distinguished member of this College, whose name we perpetuate by an annual oration, first conceived the idea of putting the diseased lung to rest, but it remained for Professor Jacobaeus, a physician, to add a further and important step to the procedure by the intrathoracic division of pleural adhesions — a step which had not been undertaken even by so imaginative and radical a surgeon as was John B. Murphy.

This, indeed, was a very significant and unusual occurrence, but, properly interpreted the giving of this fellowship was merely an admission of the successful invasion of the surgical field by one who occupies a chair of medicine and the prompt recognition of his contribution by the surgeons. Similar therapeutic invasions of what was once "internal medicine" have been made by those who because they handle a scalpel and are willing to set broken bones are called surgeons, with no corresponding recognition, so far as I am aware, by societies of physicians.

There are, however, certain exceptions in the case both of individuals and of special societies — men who without disrespect are called surgeon-generals of army, navy, or marine corps, are apt to hold membership in societies both of physicians and surgeons, even though, like the lamented Gorgas, they may be essentially sanitarians — societies, too, which recognize the inadvisability of confining their numbers to those averse or otherwise to a participation in surgery. The neurologists, for example, have opened their membership to so-called neuro-surgeons, to the unquestioned benefit of those who do, and those who do not, care personally to employ operative methods of treatment. It has made the surgeons strive to be better neurologists, and given the neurologists a better conception of what therapeutic contributions their surgical colleagues are capable of making. It enables both groups better to keep their feet on solid ground and there is no danger that the society will ever become so overrun by the surgeon as to let operative therapy fly-away with itself and jump over the moon.

TENDENCIES IN PHYSIC AND SURGERY

May I indicate the direction of our present drift, as physicians and as surgeons, by citing two recent examples from my own clinic — they are

extreme examples, I admit, but they will serve my purposes. Patient Number One was referred for diagnosis from a sanitarium which she had entered because of headaches, and where she had had a long and expensive sojourn. She brought with her a sheaf of records detailing special studies, made by different people, on her blood (even to the coagulation time), cerebrospinal fluid, stools, fields of vision, metabolism, alveolar air, and carbohydrate tolerance. It was an impressive array of findings, all within the normal limits of error. The X-ray, however, had shown a "closed-in sella," and after a period of pituitary gland administration without benefit, she was finally advised to undergo an operation and sent here for that purpose. So far as we could determine, she was an overconscientious and overworked medical librarian greatly in need of a long-postponed vacation, who incidentally had been reading at odd hours a popular book on the ductless glands.

In contrast to this, let us turn to the surgeon-specialist and his outstanding fault, in that he often fails to see the patient whole. At the moment of this writing, Patient Number Two has entered the hospital — a poor fellow who for several years has been having frequent uncinete seizures, associated with a vivid olfactory impression. Meanwhile, he has had nine intranasal operations in separate sessions — a septal resection, ethmoids, sphenoid, and both antra opened and drained, turbinates removed, and finally all his teeth extracted. Of course we smell with our noses, the patient complained bitterly of a disagreeable odor, *ergo* nasal operations. what could be more simple? That he had during all this time an homonymous hemianopsia was not observed. It is venturesome and expensive thing to consult a surgical specialist who does not see beyond his own — or his patient's nose. And this represents for all of us the great danger of surgical specialization, when carried to an extreme, whether it be in rhinology, gynecology, neurology, or what you will. And when the specialty removes itself from contact with general medicine and retires to an isolated hospital given over to a single class of cases it is a danger still more difficult to avoid. Indeed, a ward in a general hospital, so given over, may become no less a place of isolation with its inevitable narrowing tendencies.

A wise physician and teacher, in discussing internal medicine as a vocation, once said that "the manifestations of almost any one of the important diseases in the course of a few years will box the compass of the specialties." It is no less — perhaps even more true of surgery, and for this reason I believe it to be fundamentally essential in a general hospital, however inconvenient for the at-

tendants, that conditions represented by the specialties shall be scattered in the wards among the patients still grouped under general surgery, so that staff, house officers, nurses, and students alike shall at least continue to have some due sense of proportion regarding general surgery and surgical specialization, and the relation of both of them to Medicine.¹

THE ROLE OF THE COLLEGE

This College of Surgeons in its short life has assumed some very responsible functions. It is playing a not unimportant role in international affairs by bringing together through the common bonds of professional interests the surgeons of this western hemisphere — of Canada, Mexico, and South America as well as of the United States. We have much to learn from each other. Another most important task it has undertaken is to improve, and in a measure to standardize the work done in our larger hospitals. The modern "Survey" with public ventilation of its findings is one of our most advantageous methods of bringing about reforms. So our hospitals, some seven hundred in number, which have over one hundred beds each, have been classified with the result that improved methods of organization have been adopted which have enormously safeguarded the patient particularly the patient destined to undergo the hazards and aftermath of an operation. It has been an expensive and laborious task, this survey, but a task well worth while, and it is now to be extended so as to include the smaller community hospitals of over fifty-bed capacity, which are far and away more numerous.²

The College, too, has from the outset taken a vigorous stand against that abomination which prevails, it is said, in some parts of the country to such an extent that public confidence in the profession has been seriously shaken. It is a matter which bears some relation to these very trends of physic and surgery which I have endeavored to make clear earlier in this address — the surgeon becoming a pure operative technician, incapable of making a diagnosis — the physician, impoverished in therapeutic resources and with so poor

¹I do not know whether a proposal that my medical colleague and I exchange places for a few weeks each year will ever be acted upon, but we at least hold a conjoint visit to the medical and surgical staffs once a week, and thereby endeavor to see Medicine whole, and to encourage our students to do so.

²It may be noted that 75 per cent of the one hundred bed hospitals had adopted by 1921 at least the minimum standards of acceptability, whereas in 1918 only 13 per cent of the 692 hospitals surveyed had been accepted.

(Continued on Page 676)

COMPOSITE EARLOBE GRAFTS FOR RECONSTRUCTION OF NASAL DEFECTS

Composite Earlobe Graft Produces Excellent Cosmetic Result In Nasal Defects

Traumatic or surgical loss of parts of the nose presents the reconstructive surgeon with problems of contour, color match, and function. Composite earlobe grafts have been employed successfully in recent years to replace amputated or avulsed parts.

CASE REPORT

This seven year old girl suffered partial amputation of her right nostril as a result of a dog bite. She presented with a defect that measured 0.8 cm. x 0.8 cm. The bite destroyed the right nostril rim and removed part of the lower lateral cartilage (Fig. 1). I elected to reconstruct the nose under local anesthesia, because of the recent ingestion of food by the patient. The wound margin of the right nostril was completely excised both in thickness and peripherally for a distance of 3 mm. The lower lateral cartilage was partially resected. The resultant deficit now measured 1.1 cm. along the alar rim and 1.0 cm. in vertical height.

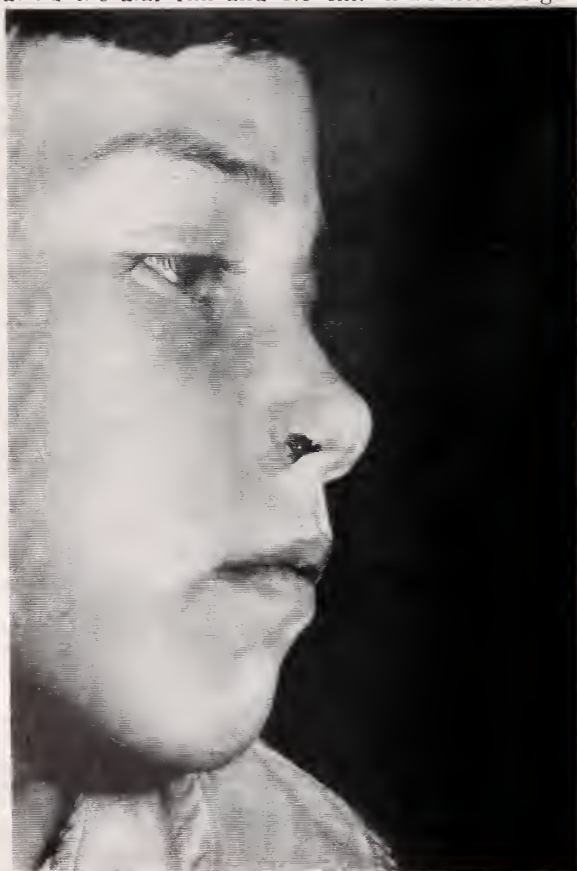


Figure 1. Preoperative view demonstrating partial avulsion of the right nostril.

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A pie-shaped wedge of tissue was taken from the right earlobe. It was tailored to fit into the nostril defect and sutured in place with fine sutures. The donor site was closed in layers (Fig. 2). The patient was treated postoperatively with iced saline compresses to her nostril. The composite graft, which appeared white in color immediately following surgery, turned dusky the following day. Subsequently it became pink. The patient was discharged from the hospital on the sixth postoperative day. The composite graft blended in color with the surrounding tissue over the next several months (Fig. 3 and 4).



Figure 2. Composite graft in place at the time of surgery.

DISCUSSION

Composite grafts from the ear have been used to reconstruct soft tissue defects of the nose since the mid 1800's. Pancoast is credited with the first recorded successful earlobe composite graft⁸. Skin, subcutaneous tissue, and cartilage from the helix or concha have all been used for reconstruction^{1,3,11,14-16}. The use of the composite helix graft was popularized during World War II by J. B. Brown in the United States¹. Dupertuis reported eleven cases of composite earlobe grafts in the first issue of *Plastic and Reconstructive Surgery* in 1946.⁸ Subsequently composite earlobe grafts have been used by many surgeons in this country with a marked degree of success^{5,12,13}.

Although it is common practice and good surgical technique to allow dog bites to remain open

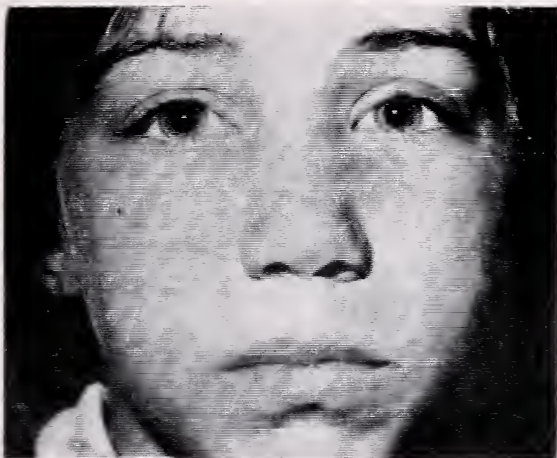


Figure 3. Eight months following reconstruction of the right nostril.



Figure 4. Eight months following reconstruction of the right nostril, demonstrating normal contour.

for dressings for control of the marked mixed infection which may attend this type of trauma, adequate excision of devitalized tissue with careful wound toilet has allowed successful closure of many of these wounds. The use of split thickness or full thickness skin grafts was entertained in the reported case, but not used because of the poor color match and depression that would result. Local flaps

were considered but not used because of the deformity that usually attends their use. The advantages of a composite earlobe graft are good color match and minimal deformity of the donor site. The compact earlobe fat permits the graft to be tailored with ease to the desired thickness and size. Adequate pre-medication permitted operation under local anesthesia without discomfort in the reported case.

The return of circulation to these grafts has been the subject of reports by many investigators^{9,10}. The usual snow-white appearance changes to a blush after six hours, followed in turn by a dusky appearance suggestive of circulatory stasis in the graft¹⁰. In subsequent days the graft color reverts to that of the surrounding skin. Cooling is an acceptable technique for decreasing the metabolic needs of tissue. The use of cooling in composite grafts has been advocated by Conley and Van Frankel, Douglas, and Rees^{2,7,12}. Postoperative pressure dressings were not used in this patient since they prevent frequent observation of the graft and the application of cold compresses¹².

The mechanism by which active circulation is established in a composite graft is not fully understood. As pointed out by Rees, observations pertaining to circulation in whole thickness and split thickness skin grafts and pedicle flaps do not necessarily apply to composite grafts¹³. Converse and Rapaport have shown an active capillary invasion of composite grafts in animals and in whole thickness skin grafts in man within the first twenty-four hours³. Rees reported the observation of blood flow through a stereomicroscope in human composite grafts as early as twenty-four hours¹³. It has not been determined whether the erythrocytes found in the composite graft are carried in with the inflow of nutritional lymph as proposed by Hynes⁹, or as the result of direct immediate vascular anastomoses between graft and host vessels prior to actual endothelial invasion of the graft⁴. The invasive ingrowth of host capillary buds occurs by the fourth day and apparently replaces the endothelium of the graft vessels¹².

DeHaan and Stark have described a means of augmenting the circulation in the site to be grafted by treatment with histamine⁶, a method not employed in the reported case.

SUMMARY

This is the report of a case in which a composite earlobe graft was used for repair of a nasal defect. A smooth contoured nostril with a good color match resulted, and deformity of the earlobe donor site was minimal.

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(Continued on next page)

THE PHYSICIAN AND THE SURGEON

(Continued from Page 673)

a conception of surgery that he will let out his patient to the lowest bidder willing to operate at his dictation, and divide the purse.³ This takes us back to the abuses of the Middle Ages. It is an abuse which could not possibly exist in any community if the surgeon was trained to make his own diagnosis and if the physician would refuse to employ a surgeon incapable of arriving at an independent opinion regarding the necessity or advisability of an operation. For such a surgeon is apt to be equally neglectful of what is often the most important part of every surgical procedure—the after-treatment. The physician who lends himself to a such a practice is in the position of one who prescribes a dangerous drug to his patient without knowledge of its dosage or action, for there is no drug in the pharmacopœa so dangerous as misapplied surgery.

³It is significant of the success of some of the activities the College have engaged in, that laws against fee-splitting have been adopted by many State legislatures.

It seems to me that it would not be a bad idea if in our tests of eligibility for fellowship in this College — tests which not only are those of moral and professional character but of operative experience and skill — we should demand something more than the mere report upon a fixed number of major operations successfully performed, but should require, as well, information as to whether the diagnosis of these cases were the result of the candidate's own personal observation, or whether they were made for him by another.

We have seen that the present trends affecting the physician and surgeon are, on the one hand, toward preventive medicine and good nursing which lessen the importance of drugs in therapeutics; on the other, in surgery, an ever-increasing subdivision and specialization which tend to magnify the importance of mere handicraft. Prevention, it is true, can also be applied in surgery. Many industrial accidents can be prevented: the rule of safety first can be followed; there would be no more gunshot wounds if fire-arms and war were abolished; if we can finally stamp out tuberculosis and eliminate cancer there will be far less for the surgeon to do. If women did not have children, if people did not drink, if we could only keep the policeman off his feet, the housemaid off her knees, the miner off his elbows, the aviator out of the air, the boys away from football; if all children in goitrous districts were given a little iodine, there would be less need for the surgeon. But we do not yet live in the Isle of Utopia, and however much the need of the physician may be lessened through the agency of preventive medicine, by

eliminating disease as typhoid has been largely eliminated, and yellow fever, and as malaria can and will be, and many nutritional disorders and perhaps goiter, the surgeon will continue to be needed and I cannot see but that he must become a better and better physician.

When physicians acquire a more intimate knowledge of surgery, fewer people in need of operative procedures will be turned over to the surgeon too late, after delays caused by an inordinate number of unnecessary laboratory procedures. When surgeons are required to have a thorough grounding in general medicine before practicing their handicraft, fewer unnecessary operations will be done and many of the evils which exist in their professional relationship with physicians will be eliminated.

All of which has been said as well and much more briefly by Lanfranc: "No one can be a good physician who has no idea of surgical operations, and a surgeon is nothing if ignorant of medicine. In a word, one must be familiar with both departments of Medicine."



COMPOSITE EARLOBE GRAFTS

(Continued from previous page)

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OUR PRIZE POSSESSIONS*

There Is A Feeling Of Presence In The Works They Left For Us

When it was suggested that I talk about the prize possessions of the Library tonight, I said "no," firmly, unequivocally, because public speaking gives me stage fright and because, even more to the point, I'm not a qualified medical historian. My knowledge of rare books is very hit or miss. Then, I thought, what would Doctor Hersey say? Judging by the scoldings he gave his colleagues when he felt they were not treating his library with proper respect, he'd tell me I was selfish, ungrateful for the wonderful opportunity and fun I've had, and an improper custodian who should turn in her badge. And, that in his day, the learn-as-you-go, do-it-yourself medical history librarian was rather more common than someone trained in the field. I was just carrying on a long tradition.

GEORGE DALLAS HERSEY

There is a plaque in the Dickerman Reading Room dedicated to George Dallas Hersey, who was responsible more than anyone else for the richness, even the very existence, of our collection. The motto on the plaque reads "*Si Monumentum Requiris Circumspice*" and these words refer to the collection of historical material, to the large number of medical periodicals, and even to the building itself for it was constructed to house the Library.

Doctor Hersey was born in Foxboro, Massachusetts August 12, 1847.¹ After attending the "English and Classical School" in Foxboro, he went to Brown University where he received an A.B. in 1869, and an M.A. in 1872. His first career was teaching but he started studying medicine with Doctor William H. Wilbur of Westerly as preceptor during the few years he taught in that town. His degree of Doctor of Medicine was granted by the University of the City of New York in 1874 and, after spending a year as surgical intern in Hartford Hospital, he opened his office in Providence in 1875. He wasted no time in joining the Rhode Island Medical Society and the Providence Medical Association and in becoming active in both organizations where he added his voice to those of Doctors Timothy Newell and Walter E. Anthony in stressing the need for a library. Doctor Hersey carried on a busy practice and had numerous hospital appointments and civic commitments.

HELEN, E. DE JONG, of Providence, R.I.
*Librarian, The Rhode Island Medical Society
Library, Providence.*

He belonged to the American Academy of Medicine, the American Academy for the Advancement of Science, and the Association of Medical Librarians, serving as its Treasurer during 1901-1902.

But the Library was his great love, and in building its collection, "he enlisted so heartily . . . that henceforward it became his life's ambition to carry it to a successful accomplishment."¹ At the dedication of the plaque, March 1921, Doctor William R. White said.² "During my seven years of service as secretary of the Society, it was my privilege to see much of him and to work with him more or less in the publication of the *Transactions of the Society*. Often I would go to his office after eight in the evening and always found him surrounded by books, gifts from one or another source, all for the library. It was his delight to tell me about them and read to me selected choice paragraphs. It was a familiar sight frequently to see him in his buggy on his way to the library with volumes or pamphlets piled on the seat beside him. . . . When his professional friends were starting on vacation journeys, his last word would be a request that they call on doctors, especially venerable ones, and learn of some of rare and interesting book for his library." It was this devotion to the collection of material that made it possible for us to supply the late George Potter with references in the *Dublin Journal of Medical Science* when he needed them for his articles on the potato famine in Ireland. Doctor Hersey spent winters in the south and often shipped back cartons of his attic combings to Miss Grace Dickerman. Thus we could produce the *Confederate States Medical Journal* for 1865 for a Brown graduate student. We have often been surprised at being able to answer a request for an item that one would not expect to find in a small library in a small state.

He speaks of his interest in the historical holdings, "The library of a society like ours has also an important function as the preserver of our medical history. In the rush of our daily work we forget the men and the work of a former generation. The medical history that we overlook the library cares for, and a future generation will find carefully preserved for reference, not only what our predecessors attempted, but also what we and our colleagues are doing and publishing."

(Continued on next page)

*Based on a talk given at a meeting of the Providence Medical History Society, September, 24, 1969.

THE FIRST LIBRARIAN

I shall not go into the history of the library to any great extent for this has been done several times by experts.³⁻¹¹ A librarian was chosen at the first meeting of the Society in 1812 and each year until 1825, when two Librarians and Cabinet Keepers were chosen, one for the Northern District and one for the Southern District. This procedure ended in 1866 and, although the records¹² mention reports given verbally or in written form from time to time, there is nothing to prove that appointed gentlemen had much more than honorary positions as far as books were concerned. As Cabinet Keepers, they collected a large number of anatomical specimens which were given, eventually, to Brown University. In 1824 Doctor Caleb Fiske gave his library to the Society, accompanied by a letter: "Gentlemen, believing it to be an Object of Considerable Interest to establish a medical Library for the Use of the Society, and as no successful Effort hath hitherto been made to effect so desirable a Purpose, I am induced to commence the Work by presenting to the Society Seventy-two Volumes. . . . This small Beginning may serve as a *nucleus* for the Accretion of useful Matter, and it is to be hoped will be followed with additions from Time to Time by the Society or some of its Members."¹³ An invoice accompanied the gift and a few of the titles it contained are on our shelves but are not identified as being his gift; the others are not in our possession and are presumed lost. Doctors Timothy Newell, Walter E. Anthony, and Charles O'Leary carried on a campaign for a library and meeting place from 1876 until success met their efforts and Doctor Hersey was appointed Librarian in 1880, and became custodian of one hundred and thirty volumes. The holdings were augmented that same year by the entire periodical collection belonging to the Providence Medical Association which had started subscriptions as early as 1848. The first "home" was in the Franklin Society rooms, but in 1900 the collection was moved to the Providence Public Library where it grew to such proportions that the Librarian, Mr. William Foster, informed the Society "in courteous but none the less compelling terms" that the space was urgently needed for other purposes. In 1912 the books and periodicals were moved to our present Library building.

LOST VOLUMES

It is little short of miraculous that we have such an extensive historical collection as this story of "lost" volumes, admirably told by Doctor Irving A. Beck,¹⁰ will illustrate: "One medico-literary mystery exists in the history of our library. In 1868, the pathologic specimens, Books and Pamphlets belonging to the Providence Medical Asso-

ciation were presented to the Rhode Island Hospital, as were also those of the Rhode Island Medical Society. In 1880, the secretary of the association requested the trustees of the Rhode Island Hospital to return the journals, but no record exists, either of our own or that of the Rhode Island Hospital as to whether they were. It is known that about 1930 there was a literary house-cleaning at the Rhode Island Hospital, and except for some rare items salvaged by members of the medical staff, many old books and journals, presumably part of the above loan, were disposed of. Parenthetically, should any of those discriminating physicians who literally plucked these brands from the burning be present, may I express a plea for their eventual return — 80 years after the original request — to this library. I can assure them that adequate recognition of their interim custodianship will be made. The mystery is that somehow the invaluable files of the periodicals — some subscribed to since the inception of the Society, such as the British LANCET, which dates from 1823 — are intact. Did Doctor Hersey somehow get the periodicals back, or did he in some manner manage to fill in the missing issues? Considering the magnitude of the latter task, I suspect that he probably personally retrieved them, and this is why no formal record exists."

On September 15, 1969, Doctor Philip Batchelder, one of the gentlemen who took part in the salvaging of the books, presented this Library with his rescued volumes. Some of the brands have, indeed, been "plucked from the burning."

GIFT COLLECTIONS

We were fortunate that several collections of valuable items were given to us after Doctor Hersey became librarian. You will notice that association copies on display tonight bear the names of Isaac Senter, David King, James Eldredge, the Wheatons, Usher Parsons, George L. Collins (all of our editions of Jenner belonged to Doctor Collins), Leander Utley, Horace Miller, and other Fellows of the Society who valued libraries. You will notice, also, that interest in medical topics wasn't confined to physicians — several books were owned by Moses Brown. We received a recent gift of one hundred and thirty-three rare books and facsimiles from the Estate of Madelaine Ray Brown, and several of these have been placed on exhibition.

Eleven hundred books by and about doctors, non-technical in nature, were given to us in 1927 by James Henry Davenport. This unique collection has grown through purchase and gift to seventeen hundred items and contains poetry, novels, art books, biographies, history, travel, and several other categories representing the many interests of

the physician. We try to buy books of lasting interest and to avoid crowding the shelves with pot-boilers, sacrificing quality for quantity. Also, the collection is flexible, with books that belong in the peripheral sciences, books about scientists, and fiction with a medical slant. Thus we felt that *The Double Helix* by James D. Watson and *The Naked Ape* by Desmond Morris should be included and that Dylan Thomas' play, *The Devil and the Doctors* would not be out of place.

For *An Appreciation of J. H. Davenport*, we refer you to the excellent article by Doctor Robert V. Lewis.¹⁴

The *Charles F. Gormly* collection of medicolegal texts is small in size but large in use and is kept active through an annual gift by Mrs. Gormly. The *Veterinary Medicine Collection* is the gift of the Rhode Island Veterinary Medical Association. A yearly contribution from that organization enables us to subscribe to two periodicals and to purchase texts in the field. And we have portraits, pictures, instruments, pamphlets, diplomas, records, duplicates of our own publications and, as I have been very thoroughly brainwashed by my medical-historian friend Getrude Annan as to the value of so-called ephemera, we keep programs, menus, and every odd newsclipping that comes our way. As long as the boxes and the storeroom can hold this material, we shall continue to play squirrel.

OLIVER WENDELL HOLMES DIXIT

In re-reading the various histories of our Library, I found that the following quotation from an essay by Oliver Wendell Holmes¹⁵ was used many times, and I wish to use it too, for it seems to embody the feeling that those of us who are hooked on history and on books have: "And apart from any practical use to be derived from the older medical authors, is there not a true pleasure in reading the accounts of great discoverers in their own words? I do not pretend to hoist up the *Bibliotheca Anatomica* of Mangetus and spread it on my table every day. I do not get out my great Albinus before every lecture on the muscles, nor disturb the majestic repose of Vesalius every time I speak of the bones he has so admirably described and figured. But it does please me to read the first descriptions of parts to which the names of their discoverers or those who have first described them have become so joined that not even modern science can part them; to listen to the talk of my old volume as Willis describes his circle and Fallopius his aqueduct and Varolius his bridge and Eustachius his tube and Monro his foramen — all so well known to us in this human body; it does please me to know the very words in which Wins-

low described the opening which bears his name, and Glisson his capsule and De Graaf his vesicle; I am not content until I know in what language Harvey announced his discovery of the circulation, and how Spigelius made the liver his perpetual memorial, and Malpighi found a monument more enduring than brass in the corpuscles of the spleen and the kidney."

It is a feeling of presence, of knowing that these books were created by men who lived, loved, argued, were happy, were sad, were dedicated and worked hard, and who are living today in the works they left for us. It is the sensation you have when you stand in the anatomical theatre in Padua with your hands on the smooth railing, or when you wander through the old streets of Edinburgh.

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THE USE OF ORAHESIVE® IN THE SURGICAL TREATMENT OF PLANTAR VERRUCA

Adhesive Dressing Capable Of Adhering To Moist Surfaces Facilitates Surgical Procedure

The treatment of plantar verruca falls into the domain of a number of medical specialists, among them orthopedic surgeons, general surgeons, dermatologists, and radiologists. Some plantar warts occasionally respond successfully to suggestion, equipment with flashing lights, and similar apparatus. However, many are resistant to any therapy short of surgical removal.

In a busy orthopedic practice we have occasion to treat at least fifty patients each year for plantar verrucae. Some patients present two, three or more warts on one or both feet.

It has been our custom to excise the plantar verruca down to the subcutaneous fatty layer, if necessary, to effect complete removal. As a rule we use local infiltration anesthesia (1 or 2 ml. of 1 per cent Xylocaine®).

The local bleeding is frequently annoying, and a slow oozing of blood may persist for as much as 15 minutes in some cases. Cautery with a silver nitrate stick is helpful, but one hesitates to use this too vigorously because of local tissue necrosis. When the patient is sent home with a small pressure dressing over the excised lesion, he occasionally phones within the hour to report that his stocking is soaked with blood. This is not only annoying to the patient but can be alarming to the more apprehensive individual.

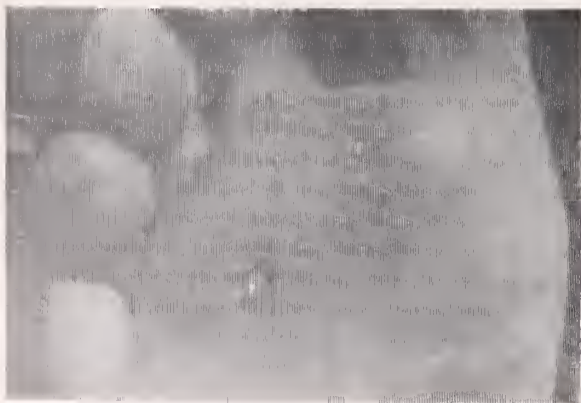


Fig. 1: Wounds resulting from excision of two plantar verrucae in metatarsal area.

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STANLEY D. SIMON, M.D., *Chief, Department of Orthopedics, Miriam Hospital, Providence*

HENRY M. LITCHMAN, M.D., *Assistant Surgeon, Department of Orthopedics; Miriam Hospital, Providence*

We learned from a dental colleague that an intra-oral bandage named Orahesive®* was available, that had the special faculty of adhering to *moist* surfaces. The material reportedly was non-toxic and simple to apply. It appeared that this might prove of value as a dressing following the excising of plantar verrucae, as an effective seal for the small oozing wounds created.

Orahesive® is a thin wax-like sheet of pectin, gelatin, sodium carboxymethyl cellulose, and polyisobutylene coated on the outside with a shiny, transparent polyethylene film. The adhesive surface is protected with opaque parchment backing, which can be peeled off with ease.

During the past six months the authors have used the Orahesive® dressing in twenty cases, ranging from 11 to 46 years of age. Approximately half of the patients presented multiple plantar verrucae, two patients with three warts, and one with four verrucae, two on each foot. The dressing has proved to be very satisfactory.

The Orahesive® bandage should be cut with a scissors to fit the wound carefully, since the material adheres only to the moist raw area. The parchment backing is removed, and the exposed surface of Orahesive® pressed firmly into the small



Fig. 2: Orahesive® dressings in the wounds noted in Fig. 1, several minutes later.

wound. (Figs. 1 and 2). We advise maintaining *firm pressure* over this for at least a minute, to minimize the possibility of a small hematoma forming underneath the Orahesive.[®] A piece of moleskin is applied over the area as a final dressing, and the patient discharged wearing a shoe.

The Orahesive[®] dressing gradually disintegrates, leaving only the thin polyesthylene film, which peels off when the wound has healed.

The material appears to have potential value as a dressing material for moist lesions in other parts of the body, but it is emphasized that it should not be used to cover areas in which there is gross infection.

CONCLUSIONS

The authors have been impressed by the simplicity and effectiveness of the use of Orahesive[®] as a dressing following excision of plantar verrucae. No instance of sensitivity or local reaction has been noted in any patient to date.

*E. R. Squibb & Sons, New York

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COMPOSITE EARLOBE GRAFTS

(Concluded from Page 676)

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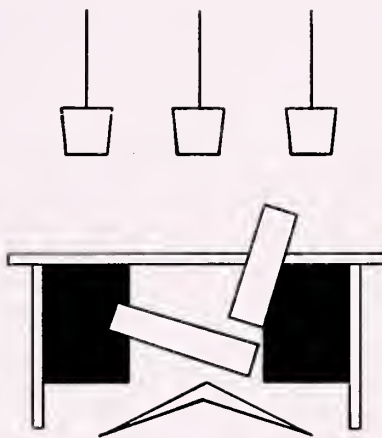
ONE SENTENCE ESSAY

Since the calorie-counting craze started in the United States a decade ago, the production of the chemical cyclamate has spurred from almost nothing to about 10,000 tons a year, enough to sweeten 50 billion cups of coffee.

...N.Y. Times News Service

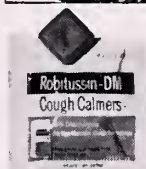
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A-H ROBINS

S.L.E.: A MODEL FOR THE STUDY OF IMMUNOLOGY

Disorder Is Auto-Immune In Nature With Exact Etiology And Mechanism Obscure

The science of immunology is increasingly complex with much of its data seemingly esoteric and contradictory. The aspects most meaningful to the practicing physician are those that can be related to clinical problems. In order to make relevant and intelligible some of the complicated and massive data available in the literature, I shall focus attention on a single clinical entity, systemic lupus erythematosus (S.L.E.) After describing the immunological abnormality in this disease, I shall attempt to associate this abnormality to related immunological data in the fields of anatomy, ontology, phylogeny, physiology, and biochemistry.

PROLIFIC ANTIBODY PRODUCERS

Patients with lupus erythematosus are prolific antibody producers, both quantitatively and qualitatively. A vast number of antibodies has been found in such patients, such as anti-nuclear, anti-lysosome, anti-thyroglobulin, anti-thrombin, anti-erythrocyte, anti-muscle antibodies, and Wasserman antibody.¹⁻⁵ Of these antibodies one of the more significant is the Wasserman. A false positive Wasserman test may antedate the onset of overt symptoms of systemic lupus erythematosus by many years,⁶ a fact which frequently causes anxiety to the patient and confusion to the physician. However, the most characteristic antibody in lupus, and the one responsible for the positive L.E. preparation, is an anti-nuclear antibody, specifically an antibody to soluble nucleoprotein. This antibody may be found occasionally in normal individuals and in other disease states (Table I), especially in chronic debilitating diseases.⁷⁻¹⁰

TABLE I

Diseases that may be associated with anti-nuclear antibodies

1. Severe Bacterial infections
2. Multiple myeloma
3. Leukemia
4. Dermatitis Herpetiformis
5. Generalized monilliasis
6. Pernicious anemia
7. Rheumatoid arthritis
8. Hepatic disorders
9. Cancer
10. Leprosy
11. Infectious mononucleosis

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DRUG INDUCED CHANGES

Drug therapy may also result in development of antinuclear antibody and may result in a false positive L.E. cell preparation test (Table II). Drugs that can cause this type of reaction represent a wide variety of molecular configuration.¹¹⁻¹³

TABLE II

Drugs that may result in anti-nuclear antibody production

1. Apresoline® (hydralazine)
2. Mysoline® (primidone)
3. Trimethadione
4. Mesantoin® (Methylphenyl ethylhydantoin)
5. Dilantin® (Diphenylhydantoin)
6. Isoniazid
7. Paraaminosalicylic acid
8. Sulfamethoxypyridazine
9. Penicillin
10. Gold therapy
11. Tetracyclines
12. Methyl dopa
13. Phenylbutazone
14. Pronestyl® (procainamide)

The problem of implicating a specific drug as a transient cause of S.L.E. lies in the fact that the symptoms being treated with that drug may in actuality be an early manifestation of S.L.E. Improvement in the patient's condition after discontinuance of the drug may coincide with a natural remission of S.L.E. symptoms. However, in the case of hydralazine and Pronestyl® there appears to be good evidence supporting the existence of S.L.E. In the case of hydralazine a dose of 40 mg. daily for about 12 months or more is required before the induction of S.L.E. Therapy with Pronestyl® for 6 months to 2 years is usually required before S.L.E. symptoms will develop. In the differentiation of idiopathic S.L.E. from the drug induced form it is helpful to note that serum complement levels are normal and kidney pathology is usually absent in the latter.¹³ The production of anti-nuclear antibody is essentially a normal immunological mechanism which most individuals are capable of developing after an appropriate stimulus.

SELF ANTIGENS

Immunological tolerance of self antigens appears to extend only to antigens on the surface of cells,

not to intracellular antigens, which may be treated as foreign proteins by the body. Since DNA is an intracellular antigen, damage to cell membranes by any means may release large amounts of DNA, which may stimulate the immunological system to form anti-DNA antibody.¹⁴ Weir¹⁵ states that after the death of a cell, subcellular antigens react with complement, resulting in release of a chemotactic agent which attracts phagocytes. These phagocytized antigens initially induce the formation of immunoglobulin-M anti-tissue antibodies, followed by immunoglobulin-G antibodies. The theory that intracellular antigens may be treated as foreign proteins can explain why other auto-immune antibodies such as anti-thyroid and anti-skeletal muscle antibodies may be present in normal individuals. Trauma or infections may cause the release of large quantities of intracellular antigens resulting in the production of specific antibody. For example, trauma or an infection of the thyroid gland may be the causative factor in the production of anti-thyroid antibody. As pointed out by Vaughan,¹⁶ auto-antibodies may also appear without known previous tissue damage. These auto-antibodies by themselves are not thought to cause further tissue breakdown.

ANTI-DNA

DNA is also present in bacteria. Therefore, overwhelming bacterial infections may also stimulate the body to form anti-DNA antibody. Anti-DNA antibody is mostly a complement fixing antibody¹⁷⁻²¹ as distinguished from non-complement fixing antibodies, such as reagin or immunoglobulin-E antibody. This property is useful clinically in that a decrease in serum complement has about a 90 per cent correlation with activity of systemic lupus erythematosus. Although there are false positive L.E. preparation tests, there also are false negative L.E. preparation reactions. About 85 to 90 per cent of lupus erythematosus patients have a positive L.E. cell preparation.²² Newer tests such as the fluorescent anti-nuclear antibody technique are more sensitive than the L.E. cell preparation test, but result in more false positive reactions.²³

Anti-DNA antibody activity has been found in several serum fractions, such as in the immunoglobulin G, M, or A fractions.²⁴⁻²⁶ This is not unusual, since the immunological system has several overlapping sub-systems, some of which are carry-overs from the evolution of our species from lower animals. The more highly evolved systems are more efficient and are super-imposed upon less efficient antibody producing systems, which are of major importance to animals lower in the phylogenetic scale. These overlapping immunological systems can be compared to the central nervous system where the cerebral cortex represents the

latest evolution, the most efficient system, and is superimposed functionally upon the subcortical centers such as the thalamus, pons, medulla, and spinal cord.

COMPARATIVE IMMUNOLOGY

To understand the overlapping immunological system in man, a review of its evolution in lower animals can be helpful. Invertebrates manifest no specific antibody activity and lack gamma globulins and lymphoid tissue.²⁷⁻²⁸ However, the body fluids of such animals contain substances that cause nonspecific agglutination and have bactericidal activity. These substances probably represent one of the earliest immunological defenses of organisms and may be compared functionally to properdin and conglutinin, components of complement, and lysozyme all found in the serum of present-day mammals.²⁹ These nonspecific substances contribute to the immunological defense mechanism of higher animals.

The hag fish, representing a primitive form of the Cyclostomata class (agnatha), which are phylogenetically the lowest existing vertebrate animals, lack specific antibodies, gamma globulins, and lymphoid tissues, but like the invertebrates have nonspecific bactericidal substances in their body fluids.³⁰⁻³² The hag fish can accept allogenic graft transplantation and will not produce a delayed positive skin test to BCG stimulation. The lamprey, a higher form of the Cyclostomata class, produces a low level of specific antibody, develops a positive delayed skin test to BCG, and rejects allogenic graft transplantation. This fish also presents the first appearance in the phylogenetic scale of the thymus, which plays a significant role in the production of a delayed positive skin test. A higher class of fish, Chondrichthyes, particularly the Holostean fishes (dog fish), have an improvement in their immunologic armamentarium in that they have a more vigorous specific antibody response than the lamprey.³³ The next immunologic improvement in the phylogenetic scale is found in the Elasmobranchii fishes, which represent a higher form of animal life in the Chondrichthyes class, for example, sharks. These fish have organized lymphoid tissue in the spleen and are noted for the first appearance of the 19-S type antibodies.^{27-32,34} Below this class the specific antibodies were in roughly the 12-S to 16-S range. In the highest form of fish life, the Osteichthyes class, the plasma cell is first noted, as in the Chondrostei subclass, represented by the paddle fish or polyodon. These fish can manifest an immediate as well as a delayed positive skin test after an appropriate antigenic stimulation.³² Another subclass of the Osteichthyes, the Teleost fishes (trout), all have

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the immunologic capabilities of the previous sub-order of fishes, but in addition can produce precipitin antibodies.³⁵ These precipitin antibodies represent a quantitative improvement.

The amphibians and reptiles have immunologic capabilities similar to the highest forms of fish, but are noteworthy in that they too have an absence of the anamnestic immune response.³⁶ In the amphibians, reptiles, and birds, as well as in the lowest forms of mammalian class, the Monotremata order (duckbill or *Tachyglossus aculeatus*), immunoglobulin M as well as immunoglobulin G is found.³⁶ The initial stimulation with the same antigen produces IgG antibodies. Some birds, such as pigeons, have only 7-S antibody;³⁷ however, birds are characterized by the presence of the Bursa of Fabricius, which some believe is analogous to the lymph nodes in Peyer's patches and the appendix. The Monotremata also demonstrate the first appearance of the anamnestic immune response in the phylogenetic scale.³⁸⁻⁴⁰ In higher forms of mammal life the magnitude of antibody production and anamnestic response is much greater. In such higher forms the organization of lymphoid follicles is more intricate than that in the simplified versions seen in the order Monotremata.

FETAL AND NEONATAL IMMUNOLOGY

Since ontogeny recapitulates phylogeny,⁴⁰ a brief study of the immunological system of the fetus is in order. At the twentieth week of gestation the fetus is able to produce IgM antibodies after appropriate stimulation.⁴¹ Reagin, or IgE, is probably produced before the day of birth.⁴² IgE is the protein fraction that contains reagin, or skin sensitizing antibody, which has been found in newborns. An immediate type of positive skin test in the newborn is thought to result from the passage of food antigen through the placenta, sensitizing the fetus. Reagin, which does not cross the placenta membranes, crosses other glandular barriers occasionally.⁴³⁻⁴⁸ IgA produced in the third week after delivery serves as an immunological protective mechanism in secretory fluids such as tears, nasal secretions, saliva, and gastrointestinal tract secretions.⁴⁹⁻⁵⁰ IgG is synthesized in the second month of life.⁵¹ The last to appear are organized lymphoid follicles and plasma cells which can be identified in the third month of life.⁵²

In relation to the ontogeny of immunology it is significant that the thymus and parathyroid glands are derived from the third and fourth pharyngeal pouches. Infants born with congenital hypocalcemia due to agenesis of the parathyroid gland may also have agenesis of the thymus⁵³ (DiGeorge's Syndrome), resulting in normal serum immunoglobulins, but impaired delayed hypersensitivity. Patients with DiGeorge's Syndrome differ from those with Bruton's Syndrome in that the latter lack serum immunoglobulins, but possess a thymus gland and therefore have an intact delayed hypersensitivity response. Patients with the Swiss-type of agammaglobulinemia differ from those with DiGeorge's and Bruton's Syndromes in that the Swiss-type lack both serum immunoglobulins and thymus gland. These syndromes are similar in that they represent congenital immunological defects.

IMMUNOGLOBULINS

When a foreign antigen breaks through the physical barrier of natural defense, such as outer membranes and skin, and stimulates the immunologic system, specific but differing types of antibodies are produced against this invading antigen by the various components of the immunologic system. At first these antibodies are of the IgM type; later IgA antibodies appear and still later IgG antibodies are present. Similarly, in systemic lupus erythematosus DNA released from cellular breakdown may stimulate anti-DNA antibodies which are the end result of the evolutionary cycle of the subcomponents of the immunologic system. It is also not surprising that the highest concentration of anti-DNA antibody is found in the IgG serum fraction,²⁶ especially since this fraction is the latest evolved component of the mammal immunologic system and represents a very efficient protective mechanism.

An understanding of immunoglobulins is helpful, since they play a role in systemic lupus erythematosus. All immunoglobulins have a common fundamental structure in that their molecular configuration consists of two heavy polypeptide chains and two light polypeptide chains linked together by disulfide bonds. The light chains have a molecular weight of 23,000 while the heavy chains have a molecular weight of 50,000 to 70,000. The heavy chains are immunologically identical in each class but are different in different classes and are the distinguishing feature for each of these immunoglobulin classes. For example, IgE⁵⁴⁻⁶⁰ was identified as a new class by Ishizaka because its heavy chain was not identical with that of IgG, IgA, IgM, or IgD.⁶¹ Presently there are five different types of heavy polypeptide chains, one for each immunoglobulin class. There are only two types of light polypeptide chains, lambda and kappa. The light chain appears to be synthesized in excess as compared to heavy chains.⁶² The immunoglobulin molecules are symmetrical as far as their heavy and light chains are concerned. Light chains of the kappa type occur twice as frequently as lambda chains.⁶³ Each molecule has the same kind

(Continued on Page 689)

Editorials

HARVEY CUSHING, M.D., 1869-1939

Published elsewhere in this issue is an address delivered by Harvey Cushing before the American College of Surgeons in 1922. The year 1969, now in its waning days, is the centenary of Cushing's birth. It is worthwhile to reread some of his views on the practice of medicine and surgery. While patterns of disease and therapy may have changed in half a century, it is noteworthy that the basic concepts which he expounded have to an uncanny degree a very timely ring when we repeat them today:

"What difference after all, is there, between physician and surgeon except in kind of cases each of them chooses to treat and in the variety of therapeutics applied?"

"The periodical turnover in our curricula is an evidence of the fact that faculties show a perennial dissatisfaction with existing conditions, and strive to find the proper average allocation of subjects; little realizing that it makes no great difference — that the fault lies with us as teachers, not with the curriculum, for medicine can be successfully taught from many angles if only students are properly stimulated and encouraged to observe and think for themselves."

"So far as our diminishing supply of family doctors is concerned, there are many who have come to feel that it would be better for us to send out after two years of clinical study alone, with

some additional knowledge of public health, a group of men to be licensed as Bachelors of Medicine. They at least could attend to the ordinary ailments and health of the rural districts. . . ."

"One looks in vain in the curriculum for a course on the common sense treatment of minor ailments."

"We must somewhere and somehow strike a middle ground between over-training in the laboratory and under-training at the bedside, or the reverse."

"Certainly at the present time our graduates — many of them at least — no longer feel that the role of the country doctor, or even the general practitioner in the town or city, is an alluring one, even a possible one, so dependent have they become on complicated laboratory findings in arriving at a diagnosis."

"Unquestionably, there is an economic element which also enters into this, for a training in Medicine at the present day is unduly long and expensive, entirely disproportionate to any possible returns from rural practice."

"When physicians acquire a more intimate knowledge of surgery, fewer people in need of operative procedures will be turned over to the surgeon too late, after delays caused by an inordinate number of unnecessary laboratory procedures."

La plus ca change . . .

CLOSE TIES

In order to introduce into Israel U.S. style residency training in surgery, Nathan J. Saltz, M.D. was invited in 1954 to become chairman of the Department of Surgery at Rothschild Hadassah University Hospital in Jerusalem and Professor of Surgery at Hebrew University. A graduate of Emory University Medical School (class of 1939) and trained in the traditional American residency program for an academic career in surgery, he accepted the challenge on a purely temporary basis. He proceeded to establish the first surgical research laboratory in Israel. His "temporary" stay has now extended to 15 years, and he has become a fixture in Israeli medicine, while remaining himself as American as pop-corn. Observers on the local scene report that he is popular and respected and has accomplished the feat of converting Israeli surgery from the continental style to the American mode based on residency training, clinical research, and investigative surgical physiology. His able papers appear from time to time in the American surgical literature.

Recently announced was the election of Doctor Albert Sabin to the Presidency of the prestigious Weizmann Institute of Science in Rehovoth, Israel. Sabin, hitherto Professor of Research Pediatrics at the University of Cincinnati School of Medicine, is, of course, best known for his role in developing the Sabin live polio vaccine, now the world standard. He will assume his new responsibilities on January 1, 1970. While his duties will be primarily administrative, he will bring to this famed institution his undoubted superior skills in virological research.

Another interesting development is the recent establishment in Israel by an important American pharmaceutical manufacturer, Miles Laboratories, of three plants. Miles was the first major American company to operate in Israel under its own name. While we are reasonably confident that the Israelis could have gotten by without Alka-Seltzer and One-A-Day vitamins, the more significant aspect of the news is the activities of industrial and

(Continued on next page)

ethical subsidiaries, including Dome Laboratories and Ames Company. The first of the Miles establishments in Israel was the citric acid plant on Haifa Bay for the production of citric acid for food processors and the burgeoning soft drink industry — a know-how acquired in connection with the manufacturer of its most familiar American product. Record breaking tonnages of the product were produced as a result of interchange of ideas between the Israeli executives and their American counterparts.

The second Miles project was the formation of Miles-Yeda, a partnership between Miles and Weizmann Institute through Yeda Research and Development Company, the Institution's commercial affiliate. Yeda is the world's major supplier of heavy water, enriched with the stable isotopes of oxygen, used widely in medicine, physics, chemistry, and biology. This program is being expanded to include compounds labeled with radioactive iso-

topes (e.g. carbon 14 and tritium). Other developing products are immunochemicals for research, synthetic protein models, and "insolubilized" enzymes and sphingolipids, developed at the Weizmann Institute.

The third and most recent Miles venture is a joint undertaking with Yisum Research Development Company of Hebrew University and the Ames Company Division of Miles, already knowledgeable in nuclear medicine techniques. The first product will be the "Trilute" T-3 test, a radioisotope for testing thyroid function. The Ames-Yisum agreement further provides for development and manufacture of medical information systems based on research at Hebrew University.

These several examples of cross-fertilization between American and Israeli medicine and industry should prove profitable and advantageous for both countries.

SLE

A review in this issue of the JOURNAL discusses systemic lupus erythematosus as a model of autoimmune disease. It is coincidental that the September 1969 issue of the MAYO CLINIC BULLETIN¹ is devoted to a symposium on the same subject commemorating the 20th anniversary of the discovery of the lupus erythematosus (LE) cell by Hargraves, Richmond, and Morton in 1948. This was some thirteen years after the classical description of disseminated lupus erythematosus by Baehr, Klemperer, and Schiffrin in 1935.² The Symposium held at the Clinic in November, 1968 honored Doctor Malcolm M. Hargraves, who participated in the exercise and delivered the leading paper, which recounted the story of the discovery and the eventual development of the 2-hour clot test (LE cell preparation).

During the evolution of the test it became increasingly clear to Hargraves that the phenomenon produced by the plasma of SLE patients was not a characteristic of the cellular elements of bone marrow, as originally believed. Hargraves demonstrated that a factor present in SLE plasma could passively induce the phenomenon in normal marrow or buffy coat.

It was subsequently shown that the LE cell factor was present in SLE serum and in defibrinated SLE plasma as well. Serum fractionation by electrophoresis, ion-exchange chromatography, and ultracentrifugation has shown that the LE cell factor is a gamma globulin now known as IgG. Antigenically it is identical with normal gamma globulin.

It soon was recognized that the LE cell phenomenon was made up of three components: (1) the reaction of the humoral factor with extruded nuclear material, (2) modification of this nuclear

material, and (3) phagocytosis of the altered nuclear material by living cells. These observations suggested that the humoral factor, now known to be an immune globulin, might in fact be an antibody to cell nuclei. Later experiments suggested that the nuclear antigen was DNA-histone nucleoprotein (DNP).

Several conventional immunologic techniques have repeatedly demonstrated antinuclear antibodies in SLE patients. The most recent, and in many ways the most graphic, is the immunofluorescence technique. By this method it is possible to depict strikingly by means of ultraviolet light attachment of antinuclear antibody to antigenic cell nuclei.

The LE factor, antibody to deoxyribonucleoprotein (DNP), combines with nuclei to produce swelling and alteration in staining characteristics. If sufficient antibody is absorbed on the nuclei, they are phagocytized by neutrophils to produce typical LE cells. If insufficient antibody is present, altered nuclei may be seen outside of cells as extracellular material (ECM). As many as one-fifth of LE cell preparations from active lupus patients may show only ECM.

It is of further interest that, by means of immunofluorescence techniques, gamma globulin can be regularly demonstrated in the kidney glomeruli of patients in locations where DNA and nucleoprotein are also known to be present. These observations conform to the renal changes commonly observed in SLE. Immunofluorescence studies on biopsy skin specimens of patients having cutaneous manifestations of SLE are also positive.

Drugs capable of activating SLE can be differentiated into those that do so through special pharmacologic properties, and those that elicit al-

lergic reactions which in turn induce the lupus. The group, which includes hydralazine, isoniazid, several anticonvulsants, and procaine anide, have the ability to stimulate the production of antinuclear antibodies. Only a small percentage of these patients, probably those with a genetic predisposition, are not reversible on discontinuance of the drug. This condition is not associated with glomerulonephritis. The lupus resulting from the allergenic drugs appears to be genuine and probably occurs in genetically predetermined cases.

All of this gives rationale to the presently available therapy for SLE. Aspirin and chloroquine (the antimalarial) are useful because of their anti-inflammatory effects. Chloroquine is most effective in discoid lupus. The steroids (prednisone) also were initially thought to be primarily anti-inflammatory. However, in view of the foregoing, suppression of the immune response would appear to be a more important effect. There is some suggestion that the effectiveness of chloroquine is predicated upon its ability to combine with DNA. Pursuing the concept of immunosuppression, a combination of prednisone and azathioprine is now

under investigation. In preliminary studies this therapy has consistently depressed pre-existing levels of antinuclear antibody. Several patients have shown a decrease in proliferative changes in the glomerulus, while others have manifested a decrease in deposition of immunoglobulin G (IgG) in the renal glomerulus of serial biopsies using microimmunofluorescence methods. A number of patients have shown a decrease in urinary protein. While the side effects of this sort of immunosuppression are considerable, the results are sufficiently promising to warrant further trial.

The brilliant renaissance of the science of immunology has made possible the transplantation of human organs and now promises to provide both an explanation and possible means of control of an obscure, often fatal "collagen disease."

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- ²Baehr, G.; Klemperer, P., and Schiffrin, A.: Diffuse Disease of Peripheral Circulation Usually Associated with Lupus Erythematosus and Endocarditis, Tr. A. Am. Physicians 50:139-155, 1935

ROLE OF SULFONAMIDES

Because of the importance of the following communication from Doctor Herber L. Ley, Jr., Commissioner of Food and Drugs of the United States Public Health Service we are reprinting it in full:

"For the past several years the Food and Drug Administration has been concerned about the changing role of the systemic sulfonamides in the treatment of infections. The increasing frequency of bacterial resistance and the development of newer and more effective drugs have sharply limited the therapeutic usefulness of systemic sulfonamides in many disease conditions for which they have been widely used in the past.

"The National Academy of Sciences-National Research Council has evaluated most of the currently marketed short-acting systemic sulfonamides (sulfachlorpyridazine, sulfadiazine, sulfaethidole, sulfamerazine, sulfamethizole, sulfamethoxazole, sulfisomidine, sulfisoxazole, and combinations of sulfadiazine and sulfamerazine with and without sulfamethazine). The Food and Drug Administration considered the Academy's comments and other available data and has concluded that these short-acting systemic sulfonamides are indicated only in the following conditions:

1. Chancroid
2. Trachoma
3. Inclusion Conjunctivitis
4. Nocardiosis
5. Uncomplicated urinary tract infections due to susceptible organisms such as *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Pro-*

teus mirabilis and, less frequently, *Proteus vulgaris*.

6. Toxoplasmosis, as adjunctive therapy with pyrimethamine.
7. Malaria due to chloroquine-resistant strains of *Plasmodium falciparum* when used as adjunctive therapy.
8. Meningococcal meningitis where the organisms have been demonstrated to be susceptible.
9. *Hemophilus influenzae* meningitis as adjunctive therapy with parenteral streptomycin.
10. Prophylaxis of rheumatic fever, as an alternative to penicillin: only sulfadiazine has been demonstrated to have substantial evidence of effectiveness.

"The efficacy of long-acting systemic sulfonamides is limited to the same range of conditions as the less hazardous short-acting drugs. Use of the less hazardous short-acting sulfonamides is obviously to be preferred.

"These drugs are no longer indicated for use in common respiratory, skin, soft tissue, gastrointestinal and chronic obstructive urinary tract infections because of their well recognized adverse effects and the lack of evidence of effectiveness. With the exception listed above (sulfadiazine in rheumatic fever) these agents are not indicated for prophylactic use.

"The Food and Drug Administration is taking steps to restrict the labeling of these drugs to the indications for which we have concluded they are effective."

UROKINASE FOR PULMONARY EMBOLISM

The National Blood Resource Program of the National Heart Institute, National Institutes of Health, is supporting a series of clinical studies to establish the effectiveness of the clot-dissolving agent urokinase against clots obstructing the pulmonary vessels.

Urokinase, a fibrinolytic substance, activates the body's clot-dissolving mechanisms by expediting the conversion of plasminogen, an inactive protein always present in the blood, to plasmin. Plasmin is a highly active enzyme that breaks down (or lyses) fibrin, the major structural material of blood clots. Earlier studies have established that the drug can produce intense, controllable degrees of fibrinolytic activity in the blood. There is little danger of ill effects, provided that patients are carefully screened to exclude those with bleeding tendencies, active stomach ulcers, cerebral hemorrhage, or other conditions that would make fibrinolytic therapy hazardous.

In this study pulmonary-embolism patients treated with urokinase are compared with an otherwise similar group of patients receiving standard anticoagulant therapy. The study will hopefully determine whether fibrinolytic drugs can significantly hasten recovery by speeding restoration of normal pulmonary bloodflow and lung function. Right-heart catheterization, pulmonary angiograms, and radioisotopic lung scans are employed in all patients both to insure accurate diagnosis and provide an objective evaluation of the results of treatment. In 1963 the Heart Institute established a Committee on Thrombolytic Agents to facilitate continued progress in the field of thrombolysis,

and in the following year selected urokinase as the most promising fibrinolytic drug developed to date.

Urokinase is derived from human urine. Since it is a "native" substance, it does not provoke an antibody response when infused into the blood. This suggests the major advantage of urokinase over earlier fibrinolytic agents derived from bacteria. The best known and most extensively studied plasminogen activator is streptokinase, derived from type A beta hemolytic streptococci. Anyone previously infected with this species of streptococcus has developed antibodies against streptokinase. Thus, in determining therapeutic dosages, enough extra streptokinase must be infused to neutralize these circulating antibodies. The infusion itself elicits a strong antibody response. Hence, streptokinase is a one-shot therapeutic procedure: repeat infusions may trigger a potentially fatal anaphylactic reaction.

Although derived from a cheap and plentiful source, urokinase is difficult to purify. The extraction and purification process is complicated, limiting the available supply and raising the cost. The estimated cost of a single infusion in amounts deemed therapeutic is about \$1,000. Large scale production could eventually reduce the cost.

The urokinase trial will involve about 200-400 patients and will run for about two years. It will go far toward determining whether the high expectations presently held for fibrinolytic therapy are justified. It is hoped that urokinase will prove to be a major breakthrough against thromboembolic complications of cardiovascular disease.

PUBLICATION CITED

The Providence Association of Medical Assistants received a national second place award for its county publication, *THE PAMA Post*, edited by Miss Martha MacDonald. The national award for editorial achievement was presented to the Providence Association on October 18, during the American Association of Medical Assistants' National Convention in Honolulu.

Rhode Island appointments to AAMA national committees for the coming year are Miss Audrey Kaloustian, Scholarship Solicitation Committee and Mrs. Anne-Marie Wyatt, Awards Committee. Miss Kaloustian is physical therapist in the office of Edward Spindell, M.D., Mrs. Wyatt, presently homemaking, was medical assistant to James Reeves, M.D., and Miss MacDonald is employed by Rhode Island Blue Shield.

ONE SENTENCE ESSAY

To one brought up in the old tradition when, for example, fractures and osteomyelitis and bone tumors were the domain of the general surgeon, when jaw resections and radical neck resections dismayed and repelled the plastic surgeons, when the "brain team" experience was a standard part of the surgeon's training, and viscera within the chest as much a part of his domain as those within the abdomen — or pelvis — there is a sense of sadness about the progressive constriction of general surgery.

... Mark M. Ravitch, M.D.

* * *

ONE SENTENCE ESSAY

We have a saying in our laboratory that the difficulty of a project goes from "Nobel Prize" to "M.Sc." in about 5 to 10 years!

... Francis H. C. Crick, Nobel Laureate in Medicine and Physiology, 1962



Let's be specific about Campbell's Soups... and reducing diets

There are more than 30 million people in America who are overweight. During the next year, you probably will see more than 1,000 of them in your own practice.

One good way to help these patients is to give them a reducing diet based on ordinary eating patterns.

Campbell has prepared a sensible plan for weight control based on ordinary eating patterns. The plan consists of a patient instruction booklet and a set of menus which provide approximately 1,400 calories daily. The menus are balanced to provide the minimum daily requirements of nutrients.

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in acute and chronic diarrheas **LOMOTIL® SAVES...**

TABLETS/LIQUID

Each tablet and each 5 cc. of liquid contain:
diphenoxylate hydrochloride2.5 mg.
(Warning: May be habit forming)
atropine sulfate, 0.025 mg. (1/2,400 grain)

body fluids... electrolytes... patients from exhaustion

Lomotil acts promptly and directly to lower the excessive intestinal motility of diarrhea. This therapeutic restraint on the overactive bowel allows a normal or more nearly normal reabsorption of water and electrolytes.

The proficiency of *Lomotil* in conserving body fluids and electrolytes often saves patients from the exhaustion that accompanies prolonged diarrhea.

Lomotil acts to control the intestinal mechanisms of diarrhea; therefore, it is highly useful in controlling diarrhea associated with:

gastroenteritis · acute infections · functional hypermotility
irritable bowel · ileostomy · drug-induced diarrhea

Warnings: *Lomotil* should be used with caution in patients taking barbiturates and with caution, if not contraindicated, in patients with cirrhosis, advanced liver disease or impaired liver function.

Precautions: *Lomotil* is a Federally exempt narcotic with theoretically possible addictive potential at high dosage; this is not ordinarily a clinical problem. Use *Lomotil* with considerable caution in patients receiving addicting drugs. Recommended dosages should not be exceeded, and medication should be kept out of reach of children. Should accidental overdosage occur, signs may include severe respiratory depression, flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia; continuous observation is necessary. The subtherapeutic amount of atropine sulfate is added to discourage deliberate overdosage.

Adverse Reactions: Side effects reported with *Lomotil* therapy include nausea, sedation, dizziness, vomiting, pruritus, restlessness, abdominal discomfort, headache, angioneurotic edema, giant urticaria, lethargy, anorexia, numbness of the extremities, atropine effects, swelling of the gums, euphoria, depression and malaise. Respiratory depression and coma may occur with overdosage.

Dosage: The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are as follows:

Children:		Total Daily Dosage
3-6 mo.	1/2 tsp. * t.i.d. (3 mg.)	
6-12 mo.	1/2 tsp. q.i.d. (4 mg.)	
1-2 yr.	1/2 tsp. 5 times daily (5 mg.)	
2-5 yr.	1 tsp. t.i.d. (6 mg.)	
5-8 yr.	1 tsp. q.i.d. (8 mg.)	
8-12 yr.	1 tsp. 5 times daily (10 mg.)	
Adults:	2 tsp. 5 times daily (20 mg.) or 2 tablets q.i.d.	

*Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

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Research in the Service of Man



this ulcer did not heal...until its surface was cleared of dead tissue and debris



FIRST APPLICATION
ELASE Ointment is applied to a deep ulceration of a finger.

EIGHTEEN DAYS LATER
Healing has progressed rapidly without interruption or interference from any accumulated purulence or necrotic tissue. Greatly reduced size of lesion and minimal scar tissue indicate quality and vigor of healing which is almost complete.



to aid in debridement
to facilitate healing
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By helping to remove dead tissue and debris from the ulcer's surface, ELASE Ointment creates a better environment for the elimination of infection, for healthy granulation...for healing. Its lytic enzymes effectively break down DNA in dead leukocytes and other debris...the fibrin in blood clots, serum, and purulent exudates...and the denatured proteins in necrotic tissue. Protein elements of *living* tissue are relatively unaffected. ELASE Ointment is indicated in stasis ulcers and in other infected or inflamed ulcers caused by circulatory disturbances. In cases requiring skin grafting, it is used preoperatively for debridement. For ambulatory patients debridement with ELASE Ointment is a convenient therapy and a regimen likely to be followed. *Precautions:* Observe usual precautions against allergic reactions, particularly in persons with a history of sensitivity to materials of bovine origin or to mercury compounds. *Adverse Reactions:* Side effects attributable to the enzymes have not been a problem at the dose and for the indications recommended. *Discussion:* Successful use of enzymatic debridement depends on several factors: (1) dense, dry eschar, if present, should be removed surgically before enzymatic debridement is attempted; (2) the enzyme must be in constant contact with the substrate; (3) accumulated necrotic debris must be periodically removed; (4) the enzyme must be replenished at least once daily; and (5) secondary closure or skin grafting must be employed as soon as possible after optimal debridement has been attained. It is further essential that wound-dressing techniques be performed carefully under aseptic conditions and that appropriate systemically acting antibiotics be administered concomitantly if, in the opinion of the physician, they are indicated. *Available:* ELASE Ointment is supplied in 30-Gm. tubes containing 30 units (Loomis) of fibrinolysin and 20,000 units of desoxyribonuclease with 0.12 mg. thimerosal (mercury derivative); and in 10-Gm. tubes containing 10 units of fibrinolysin and 6,666 units of desoxyribonuclease with 0.04 mg. thimerosal. ELASE Ointment has a special base of liquid petrolatum and polyethylene; contains sodium chloride and sucrose used during manufacture; is stable at room temperature through the expiration date stated on the package.

Parke, Davis & Company, Detroit, Michigan 48232

PARKE-DAVIS

S.L.E.: A MODEL FOR THE STUDY OF IMMUNOLOGY

(Continued from Page 684)

of heavy chains and the same type of light chains.⁶⁴⁻⁶⁷

A particularly interesting functional variant is found in IgA immunoglobulins in that IgA found in secretions contains an additional polypeptide fragment with a molecular weight of 20,000 as compared to the immunoglobulin IgA found in sera. It is postulated that this "transporter" piece enables IgA to cross glandular barriers with ease and may explain why it is so predominant in secretory fluids. Other important distinguishing features of each immunoglobulin class are listed in Table III.⁶⁸⁻⁷⁰

ANTI-DNA NOT PATHOGENIC

There is strong evidence that anti-DNA antibody by itself is not pathogenic since serum containing anti-DNA antibody has no effect on human cell cultures.⁷¹ These in vitro growing cells are not killed and their growth is not inhibited in the presence of anti-DNA antibody. Infants born to mothers with S.L.E. have anti-DNA in their serum but no systemic manifestations of S.L.E.⁷² The passive transfer of anti-DNA through the placenta into the fetal circulation is not unusual since this antibody is found in all serum immunoglobulin fractions, some of which pass through glandular barriers with ease. Another reason for suspecting that anti-DNA antibody by itself is not pathogenic is that transfusion of serum from S.L.E. patients to normal patients has no known effect on the recipient.⁷³ Lupus-like syndromes have been noted in patients with agammaglobulinemia, who should not have anti-DNA antibodies.⁷⁴

According to one of the most recent theories on the mechanisms of S.L.E., that propounded by Vaughan who has done extensive and excellent work in this field, anti-DNA does play an impor-

tant role.⁷⁵⁻⁷⁶ This theory states that the primary lesion is cellular breakdown with the consequent release of large amounts of intracellular antigen. This antigen initially stimulates the production of anti-DNA, later combines with anti-DNA, and is then phagocytized, permitting release of lysosomal products. These products cause further tissue breakdown with a resulting vicious cycle.

A constantly stimulated immunological system may become hypersensitive to minor stimulation and may over-respond both quantitatively and qualitatively.⁷⁷ This phenomena is similar to the anamnestic reaction and may explain why lupus erythematosus patients are such prolific antibody producers.

ROLE OF LYMPHOCYTES

The role of the lymphocyte in S.L.E. appears to be very important. Most S.L.E. patients have a delayed type of reaction when skin tested with products from homologous leucocytes, nucleoproteins, histone, and deoxyribonucleic acid.⁷⁸ This delayed type of positive reaction is similar to the tuberculin test and is mediated mostly by lymphocytes,⁷⁹ as demonstrated by passively transferring sensitized lymphocytes to a non-sensitized host.

These sensitized lymphocytes react with the antigen, releasing a substance which immobilizes macrophages.⁸⁰ The skin window technique of Rebuck and Crowley⁸¹ has revealed that basophils and non-specifically responding polymorphonucleocytes also play a role in delayed hypersensitivity⁸²⁻⁸³ as compared to the immediate type of hypersensitivity where the skin window reveals a predominant role for the eosinophils.⁸⁴⁻⁸⁶ Lymphocytes from a positive skin test donor transferred to a normal negative skin test recipient can cause the latter to develop a positive delayed skin test to a particular antigen.⁸⁷⁻⁹¹ For example, lymphocytes from an individual with a positive skin test to tuberculin, when injected into a non-sensitized recipient, will

(Continued on next page)

TABLE III
Comparisons of Immunoglobulins

	Ig G	Ig A	Ig M	Ig D.	Ig E**
Molecular Weight	150,000	180,000	900,000	185,000	200,000
Ultracentrifugation	7-S	6.8-S 11.4-S*	19-S	6.2	8-S
Serum level gm/100 ml.	1.2	0.18	.1	3x10 ⁻³	1-7x10 ⁻⁵
Half life (days)	23	6	5	2.8	4.6
Fixes complement	yes	no	yes	no	no
Hemagglutinating activity	yes	variable	yes		no
Transverses placenta	yes	no	no		no
Found in glandular secretions	no	yes	no		yes
Fixes in guinea pig skin	yes	no	no		no
Arthus reaction	yes	no	yes		no
Primary antibody response	no	no	yes		no
Major part of secondary response	yes	no	no		no
Reagin activity	no	no	no		yes

*Secretory IgA with transporter piece

**Assuming that properties of reagin may be assigned to IgE

cause this recipient to develop a positive skin test to tuberculin. However, if the recipient has Hodgkin's disease, this passive transfer of delayed hypersensitivity is unsuccessful,⁹² suggesting the presence of a factor injurious or inhibitory to the lymphocytes. Lawrence and others⁹³⁻⁹⁶ have found that the intact lymphocyte is not the only agent that will accomplish this passive transfer. An intracellular, freely dialyzable, non-protein substance of about 10,000 molecular weight obtained from lysed lymphocytes will also transfer a positive delayed type of skin test to a non-sensitized recipient. Another proof that lymphocytes have a major role in delayed hypersensitivity is that anti-lymphocyte serum will block the development of a positive tuberculin test as well as depress the overall immunologic response.⁹⁷⁻¹⁰³

The association of a delayed type of skin test with a disease state is demonstrated in many disorders,¹⁰⁴⁻¹⁰⁵ especially experimental allergic encephalitis where the degree of skin test reaction is directly associated with the severity of disease.¹¹⁶ In Hashimoto's struma a positive delayed skin test to thyroglobulin is more closely associated with severity than levels of hemagglutinating or complement fixing antibodies. A delayed reaction to a protein may also be a transient phase in the development of the immediate type of hypersensitivity as demonstrated by the Jones-Mote reaction.¹¹⁷ Other diseases associated with the development of positive delayed skin tests are listed in Table IV. A deficiency in the delayed hypersensitivity reaction may be found in sarcoidosis, Hodgkin's disease, lymphatic leukemia, ataxia-telangiectasia, DiGeorge Syndrome, Wiskott-Aldrich Syndrome, and in some individuals over seventy years of age.¹¹⁸⁻¹²⁰ Trayanova et al.¹²¹ in 1966 reported that lymphocytes from S.L.E. patients destroyed fibroblasts of the human embryo in tissue culture and also elements of the human kidney in kidney cell culture. This experiment again emphasizes the importance of lymphocytes in S.L.E.

ROLE OF THE THYMUS

The thymus is also affected in S.L.E., the main lesion being a loss of cortico-medullary differentiation and an increase in the number of spindle epithelial cells, cystic Hassall's corpuscles, and plasma cells. Miller states that the thymus deletes abnormal clones of lymphocytes which react against constituents of the body's own tissues. The thymus also plays a role in maturation of lymphocytes. In fetal life, cells from the bone marrow migrate to the thymus where they mature into small, relatively long-lived, x-ray resistant lymphocytes which are responsible for immunological memory and delayed hypersensitivity, and are usually found in the para-

cortical area of the lymph nodes.⁸⁰⁻⁹⁷ Anti-lymphocyte serum reacts primarily with these small lymphocytes,¹⁰² which are derived from the thymus. There is a second population of lymphocytes which are found in the intestine and appendix lymph nodes, an analogue of the Bursa of Fabricius³² in birds. These large lymphocytes are thought to be the precursors of the plasma cells, are largely responsible for antibody production,¹²⁵ and are usually concentrated in germinal centers of certain lymph nodes. Lymphocytes play a far greater role in the pathology of S.L.E. than freely circulating anti-DNA antibodies. One may predict that in the near future a delayed type of skin test, mediated by lymphocytes, will be standardized as an aid in diagnosing S.L.E.

THEORIES OF ANTIBODY FORMATION

The immunological aspects of S.L.E. play a role in the theories of antibody formation. There are two popular theories of antibody formation, the Template Theory and the Clonal or Natural Selection Theory. In the Template Theory the antigen acts as a template and stimulates the DNA (indirect template) or the RNA (direct template) of an immunoglobulin producing cell to form specific antibodies. One disadvantage of this theory is that it does not adequately explain immunologic tolerance to the organism's own tissue antigens.

TABLE IV.
Examples of Delayed Type Positive Skin Tests

- | |
|---|
| I. BACTERIAL INFECTIONS |
| Brucellergin test—(brucellosis) |
| Dick test—(scarlet fever) |
| Consists of Group A streptococcus toxin |
| Foshay test—(Tularemia) |
| Ito-Reenstierna skin test— |
| (chancroid— <i>Hemophilus ducreyi</i>) |
| Mallein test—(glanders disease) |
| Schick test—(diphtheria) |
| Tuberculin test—(Tuberculosis) |
| Mitsuda test—(leprosy) |
| II. VIRAL DISEASES |
| Frei test—(Lymphogranuloma inguinale) |
| Mumps skin test |
| III. PARASITIC INFECTIONS |
| Toxoplasmosis |
| Trypanosomiasis—(Chagas disease) |
| Casoni reaction— <i>Echinococcus</i> |
| Ascariasis |
| Trichinosis |
| Leshmaniasis |
| IV. MYCOSES |
| Blastomycosis |
| Coccidioidin Test |
| Histoplasmosis |
| Candidiasis |
| VI CONTACT DERMATITIS— |
| e.g. poison ivy patch test |

(Continued on Page 692)



When diarrhea separates
a man from his job...DONNAGEL®

**The concert was just underway,
When to the conductor's dismay
Cramps and diarrhea,
Did so quickly appear,
The maestro no longer could stay.**

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(warning: may be habit forming)
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Clears sinuses and nasal

stuffiness as it relieves cough

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Expectorant_____	•	•	•	•	•
Demulcent_____	•	•	•	•	•
Cough Suppressant_____		•	•		•
Antihistamine_____			•		
Long-Acting (6-8 hours)_____		•			•
Nasal, Sinus Decongestant_____				•	
Non-narcotic_____	•	•		•	•

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S.L.E.: A MODEL FOR THE STUDY OF IMMUNOLOGY

(Continued from Page 690)

In addition the direct theory cannot explain the continued antibody formation in the absence of antigen, which must be present as a continuous template. The Clonal or Natural Selection Theory of Burnet¹²⁶ presupposes that an organism is capable of producing hundreds of thousands and perhaps millions of different kinds of antibodies. In fetal life cells capable of producing antibodies against the body's own tissues are destroyed. Auto-immune disease, it is postulated, is based upon the appearance of a forbidden clone of cells either by mutation or perhaps as a result of incomplete elimination in embryonic life. This theory explains immunologic tolerance to the body's own antigens and the development of auto-immune disease.¹²⁷ However, Burtin and Buffey¹²⁵ showed that only one immunoglobulin and one type of light chain is synthesized by cells in an individual lymphoid germinal center. Bence-Jones protein in the urine invariably consists of light chains belonging to only one type, in each case corresponding to the kappa or lambda chain of the paraprotein present in the serum.¹²⁸ However, auto-antibodies found in patients with auto-immune disease, such as pernicious anemia, were heterogeneous in terms of light chain composition, i.e. lambda and kappa chains.¹²⁹ If these cells producing auto-antibodies were truly derived from proliferation of one forbidden clone cell, it would be expected that all of the auto-immune antibodies would have the same type of small polypeptide chains, either all lambda or all kappa chains. While neither theory of antibody formation fully explains the immunological data presently available, the clonal theory appears to answer more questions than it raises.

SUMMARY

Using S.L.E. as a text I have attempted to show how this disease entity involves various aspects of immunology including anatomic, phylogenetic, ontogenetic, biochemical, cellular, and theoretical. S.L.E. represents a complex disease, basically of an auto-immune nature, in which the exact mechanism and etiology are obscure. However, it serves as an excellent model for understanding and co-ordinating some data in the rapidly progressing field of immunology.

REFERENCES

The list of 129 references is not published, but it is available on request to the author, or to the R.I. Medical Journal, 106 Francis Street, Providence, R.I. 02903.

184 Waterman Street,
Providence, R.I. 02906



Book Reviews

THE SLEEP OF REASON by C. P. Snow. Charles Scribner's Sons, New York, 1968

Mark D. Altschule, M.D. is an editor and editorialist with few equals: his perspicacity and perspective penetrate with a rare poignancy matters moral, whether they be medical, metaphysical, or mundane. Recently in an editorial he said, "These are evil times. What makes them evil is not the presence of disease, poverty, and illiteracy. . . . The times are evil because of the prevalence of antisocial thoughts and actions. . . . Today, many antisocial acts are performed out of boredom by persons who lack the resources needed to initiate worthwhile engrossing activities. Antisocial behavior undertaken to escape boredom leads to more — and worse — antisocial behavior."

A famous Goya etching has inscribed beneath it, "The Sleep of Reason Brings Forth Monsters" — the title of Snow's latest novel. There is something monstrous about which he will speak; he will speak of evil times. Further implied in the title is the observation that Reason, used in its classical sense, must be asleep to permit the emergence of today's monstrosities. The reference point for Snow's morality in this novel, as in the whole series of his "strangers and brothers," is the moral values of the Establishment as Snow knew and knows them. His ultimate reference point always must be the reference point of every man: the moral judgments which he learned as a very young child, probably before the age of six. The Jesuits have pragmatically proclaimed for years that given a boy until his sixth year, his morality for life can be established.

Snow has been very successful. In the universities he has been honored by Fellowships and Rectorships. The public has purchased his books; they have been intrigued by his "two cultures." The political leaders of both the Conservative and Labor parties have given him civil posts of moderate importance. Nonetheless he has always challenged within the framework of propriety many of his society's values. His political thinking is certainly liberal, but not extremely radical. He has not abhorred Communism; but he has not embraced it. He is divorced; but has remarried. He has been a critic of society; he is a strong support to his society.

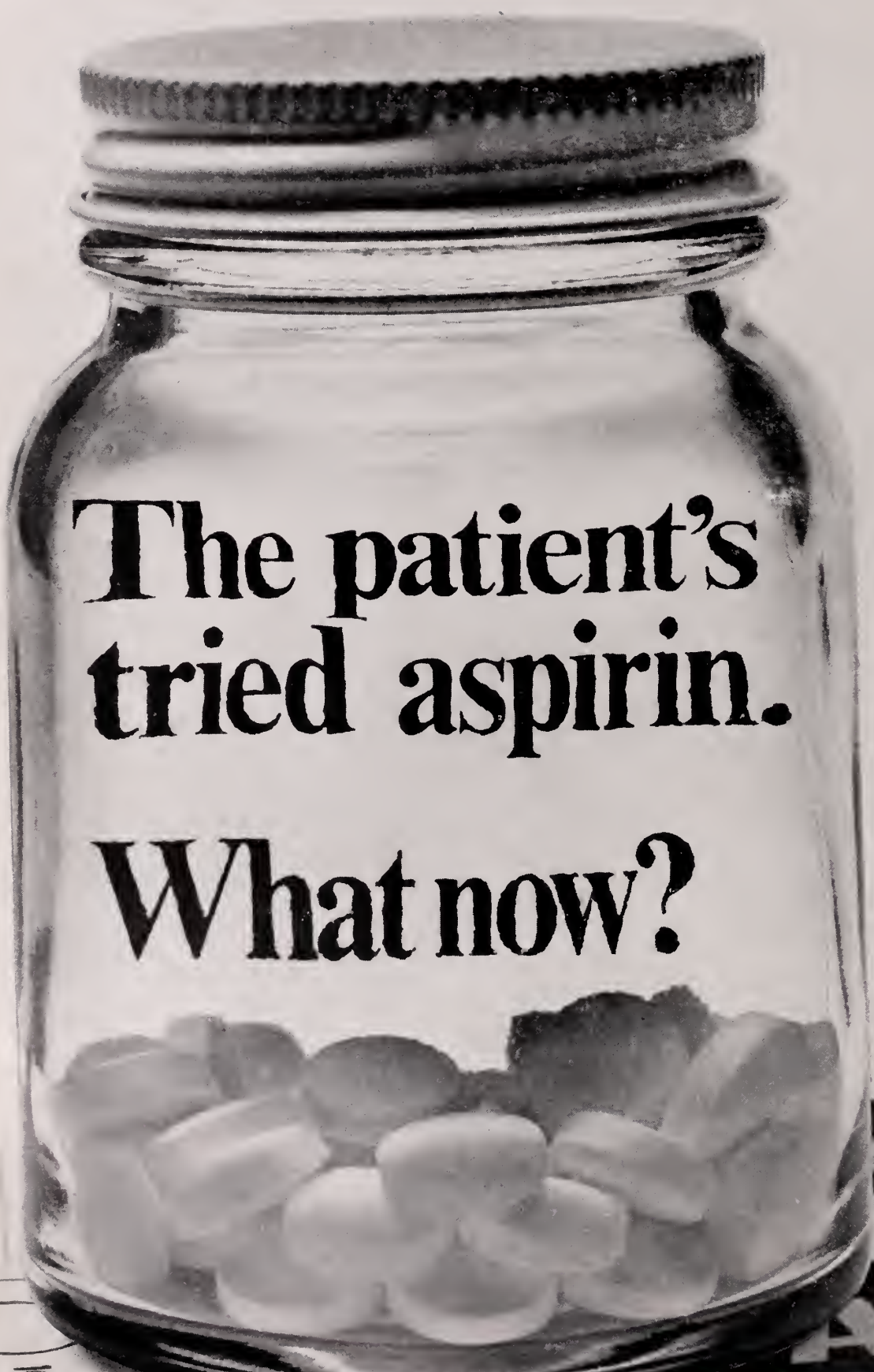
Reason, in Snow's opinion, does not permit divergences from the morality of the Establishment of a degree to which they have gone. It is in this context that he again examines some of of contemporary problems which, shame to say, are so commonplace as to have lost their shocking value.

The morality and moral philosophy of both eastern and western cultures, and especially our Judeo-Christian morality, have never been more seriously challenged except in the decadence of Rome. The commonplace value judgments to which Snow has turned this present novel are—and not necessarily in the order of importance — the broad issues of unrestrained Hedonism. George Passant personifies heterosexual Hedonism; Cora Ross and Kitty Pate-man, the Hedonists of Sadism and Lesbianism. The Hedonism of personal permissiveness and callous Sadism is exemplified by Pat Elliot. All become involved in the central incident, the sadistic murder of a young boy by the lesbian sadists, suggested by the Moors murder.

The novel starts with an examination of the Hedonism of the students' sexual revolt; it is one of the sub-themes. Technically Snow handles it clumsily, and taxes our credibility. A very bright young physics student and a very mediocre son of a very mediocre middle class civil servant are discovered in a women's dormitory — of all places the living room — at three a.m., in an orgiastic sexual tumble. The four students involved are then tried by the university. This permits Snow to expound in the words of his characters his own moral examination and judgment. The judgment may be said to be quite puerile, for the last composite judgment which is put into the opinion of the "Board of Trustees" is that what the four did was not morally bad, but merely that they were discovered, and thereby showed a lack of discretion in timing and placing. If this does not hark back to the double standard of Victorian times which Snow obviously has not escaped, I am at loss to explain it. There are several weaknesses in the moral analysis; for this reason, the novel will never be a great one. There is a lack of profundity of moral thinking, a lack of insight of feeling in the situation, and a lack of literary finesse in the machinery of the plot.

The main theme, however, is not involved with fornication on the college campus, but with a deeper and more pertinent analysis of the results of the cult of Hedonism practiced and personified by George Passant and a group of homosexuals. Snow tries to show that the permissive moral climate and the endless search for increasing Hedonistic entertainment reaches its ultimate when Passant's own niece, who obviously was influenced by her uncle's behavior, slew a young boy for kicks.

The trial is a literary device by which the broader moral issues of today's "evil times" are discussed.
(Continued on Page 696)



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IN BRIEF

Contraindications: History of sensitivity or severe intolerance to aspirin, meprobamate or ethoheptazine citrate.

Warnings: USE IN PREGNANCY: Safety for use during pregnancy or lactation has not been established; therefore, it should be used in pregnant patients or women of child-bearing age only when the physician judges its use essential to the patient's welfare.

Precautions: Keep out of reach of children. Not recommended for patients 12 years old or less. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use of meprobamate in susceptible persons—as alcoholics, ex-addicts, severe psychoneurotics—has resulted in dependence or habituation. Withdraw gradually after prolonged excessive dosage to avoid possibly severe withdrawal reactions including epileptiform seizures. Warn patients of possible reduced alcohol tolerance, with resultant slowed reactions and impaired judgment and coordination. If drowsiness, ataxia or visual disturbances (impairment of accommodation and visual acuity) occur, reduce dose. If symptoms persist, patients should not operate machinery or drive. After meprobamate overdose, prompt sleep, reduction of blood pressure, pulse and respiratory rates to basal levels, and hyperventilation are reported. Give cautiously and in small amounts to patients with suicidal tendencies. Treat attempted suicide (has resulted in coma, shock, vasomotor and respiratory collapse and anuria) with gastric lavage and appropriate symptomatic therapy (CNS stimulants and pressor amines as indicated). Two instances of accidental or intentional significant overdosage with ethoheptazine and aspirin have been reported. These were accompanied by CNS depression (drowsiness and lightheadedness) but resulted in uneventful recovery. On basis of pharmacologic data, CNS stimulation could

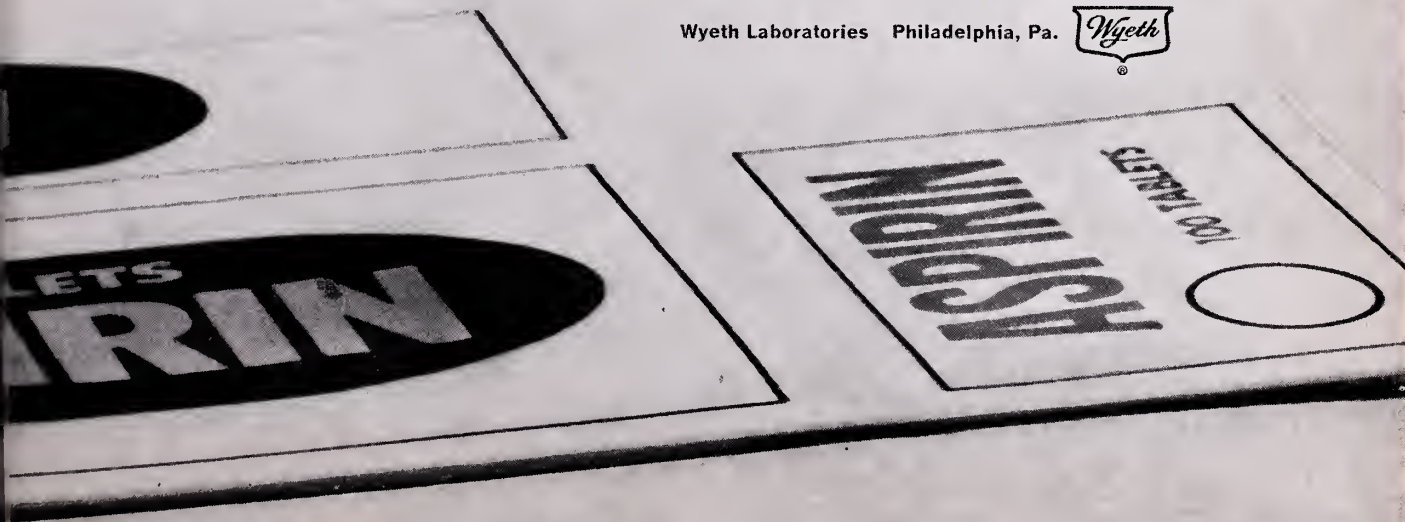
be anticipated, with nausea, vomiting and salicylate intoxication (requires induced vomiting or gastric lavage, specific parenteral electrolyte therapy for ketoacidosis and dehydration, and observation for hypoprothrombinemic hemorrhage [usually requires whole blood transfusions]).

Adverse Reactions: Ethoheptazine and aspirin may cause nausea with or without vomiting and epigastric distress in a small percentage of patients. Dizziness is rare at recommended dosage. Meprobamate may cause drowsiness, ataxia and rarely allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses. Such patients may have had no previous contact with meprobamate and may or may not have an allergic history. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. If allergic reaction occurs, discontinue meprobamate; do not reinstitute. Severe reactions, observed very rarely, include fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. These cases should be treated symptomatically including, when indicated, such medication as epinephrine, antihistamine and possibly hydrocortisone. A few cases of leukopenia, usually transient, have been reported on continuous use. Rarely, aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia have been reported, almost always in presence of known toxic agents.

Overdosage: See precautions section for management of overdosage.

Composition: 150 mg. meprobamate, 75 mg. ethoheptazine citrate and 250 mg. aspirin per tablet.

Wyeth Laboratories Philadelphia, Pa.



BOOK REVIEWS

(Continued from Page 693)

cussed. The trial occupies altogether too much of the book, and is tedious; there is a lack of climactic control and construction. If brevity is the soul of wit, then these chapters lack it. The basic question the book asks is: was this sadistic act the ultimate end of distracted reasoning of a permissive society; or, were these two lesbians actually psychopathic personalities who were by their very act insane, and not responsible for their behavior? The whole issue of criminal responsibility is raised, but not resolved. Is an evil act simply an evil act at any time? It behooves the individual if he be of sound mind to recognize right and wrong, regardless of the society in which he lives.

There is psychological play on the words "the sleep of reason," for Snow made quite a point of the fact that the girls could not quite honestly recall the actual events of the child's murder. They truly had "the sleep of reason." From the mouth of the jury's foreman, Snow's final judgment comes out that the girls were of sound mind, were responsible for their action, and were legally and morally judged guilty of the murder.

Symbolically in this last of his novels Snow observes the death of his father, which may symbolically represent the death of the best of the middle class values from which Snow himself derived his own personal strength and morality. An independence of mind and spirit were shown in the old man's reluctance to be driven anywhere, or to take a bus whenever he could walk. His Hedonism was harmless. His pleasure was singing with his old choir, again symbolically representing the fellowship of good men to a "cultural cause." The old man lived a life of almost monk-like simplicity. He supported the proposition that every man is born and dies alone; he alone is accountable to himself, if not to his God. Snow himself may not have realized the significance of this observation, and may well have written it from his subconscious. Conversely, symbolical is the father-in-law, a man devoted to nothing but leisure; the accumulation of great wealth in his youth did not sustain him in old age. The complete emptiness of the mere pursuit of leisure and wealth made him implore his relatives help him commit suicide. Snow's value judgments on the aims, purposes, and pursuits of life are rather clearly delineated and well done because of real subtlety in the character analyses of these two contrasting men.

Snow in the past has said he is proud to have risen from the "grey mists of the past, through countless generations of unnamed men." He tells us that as a young radical he challenged the Establishment on most of its counts; but from his position today, many of the challenges to the Estab-

lishment are unreasonable, and are producing monsters in the moral context. If the gods are not asleep, then man's reason surely must be.

The final morality of the novel, where Snow is most skillful, is in connecting the oncoming generation with the morality of our fathers. He does this by showing the preference of the young student for the grandfather of simple values and self-reliance, rather than the successful businessman who ended up with nothing but emptiness. "Rags to riches in three generations" has been paraphrased by Snow, without so saying, to "Immorality to morality in three generations."

This is not a pleasant novel; it is not particularly clever; it is not profoundly psychological; but it does raise the moral issues of our evil time. Morality involving the relationship between men transcends all ages, economic arrangements, and religious persuasions. If Snow can by a novel point this basic truth to a few people, he has done them and us a service.

ROBERT V. LEWIS, M.D.

TEXTBOOK OF PEDIATRICS. Edited by Waldo E. Nelson. Associate Editors: Victor C. Vaughan, III, and R. James McKay. Ninth Edition. W. B. Saunders Company, Philadelphia, 1969. \$21.50

We welcome the ninth edition of this standard textbook now edited by Doctor Nelson with two associate editors. Seventy-eight eminent teachers have contributed to this volume of over fifteen hundred pages.

As usual, it is up-to-date, complete, and authoritative. Every physician who ever treats children must have a good pediatric text-book and there can be none better than this one.

H. G. CALDER, M.D.

DERMAQUIZ ANSWER

(See Page 653)

At left: *Pemphigus vulgaris*.

At right: Poison ivy. The poison carried by the scratching nails makes characteristic, diagnostic lines of blisters.

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SCHOOL HEALTH PROGRAM IN RHODE ISLAND

New Rules And Regulations Adopted By State Departments Of Health And Of Education To Im- plement General Laws (Effective Date: October 1, 1969)

SECTION I GENERAL

Regulation I School Health Program

By October 10 of each school year each superintendent of schools shall submit for approval to the Commissioner of Education a report of the school health programs which relate to the School Health Program in the school(s) under his jurisdiction. In the case of non-public schools, each school administrator shall submit a report which relates to the School Health Program in the school(s) under his jurisdiction. These written reports shall be submitted on a form provided by the Department of Education and shall include the three aspects of school health — education, services and environment.

SECTION II HEALTH SERVICES

Regulation I Community Responsibility for Services

In accordance with Chapter 21, Section 9 of Title 16, each community shall provide for school health services for all children attending public and non-public schools within its geographical boundaries.

Regulation II Authority of School Physician

As a condition for approval of a community's School Health Program by the Commissioner of Education, that community's school health service plans and programs (except those developed and provided by the school dentist(s)) shall have received the prior approval of the community's school physician(s). The community's school physician(s) shall be licensed to practise medicine and surgery in accordance with Chapter 5-36 and Chapter 5-37 of the General Laws as amended.

Regulation III Health Examinations

Health examinations shall be made at least four times during the school experience; just before entering school (if possible) but, if not, in the first year of enrollment, and in the fourth, seventh and tenth grades. (It is strongly urged that health examinations be conducted by the child's family physician. In such instances any health examina-

tion or any health screening procedure required by this Section, which shall have been completed within six months prior to the years of enrollment noted above, shall be considered acceptable if the results of such examinations and screening procedures are made available to the school physician(s).

Regulation IV Health Records

The complete, cumulative school health record, or a copy thereof, shall be transferred when the child goes to another school building or school system.

Regulation V Vision Screening

All school children shall be given a Snellin vision screening test at least once a year, unless satisfactory evidence shall be presented to the school physician that such a test has been completed within the previous six months period. The school vision screening test shall be given by a properly trained person. State law requires that "whenever ... the visual acuity of any person is found to be 20/200 or less in the better eye ... the physician ... who ... was in charge of the examination ... shall, within 30 days, report to the administrator, of the Division of Services for the Blind the result of the examination and that blindness of the person examined has been established."

A child failing the test shall be given a retest before the parents and/or guardians are notified. The retest shall be given on another day.

Regulation VI Hearing Screening

Beginning with the first year of enrollment all school children shall be given a puretone hearing screening test by a properly trained person at least once every three years.

Pupils who failed the hearing screening test in previous years, children who repeat a grade, those with a history of a hearing difficulty or pathology, and those suspected by school personnel of a hearing loss shall be screened as often as is necessary.

Regulation VII Speech Screening

All pupils who are in their first year of enrollment, including pupils new to the school system, shall be screened for speech defects, by a properly trained person.

Regulation VIII Dental Health

All school children shall be given a dental ex-

(Continued on next page)

amination by a dentist just before entering school (if possible) but, if not, in the first year of enrollment and annually thereafter. (It is strongly urged that annual dental examinations be conducted by the child's family dentist. In such instances any dental examination which shall have been completed in the six month period prior to the time such examinations are initiated by the school dentist(s) shall be considered acceptable if the results of such an examination are made available to the school dentist (s).) The community's school dentist shall be licensed to practise dentistry in accordance with Chapter 5-31 of the General Laws as amended.

Regulation IX

School Health Personnel

Each school system shall provide for the appointment and services of a physician and a dentist. Adequate professional nursing services shall be provided. Nurses employed by public schools shall meet the certification requirements of the State Board of Education for school nurse-teachers.

Regulation X

Communicable Disease Control

Every person upon first entering any public or private school in this state as a pupil shall furnish to the administrative head of such school evidence that such person has been immunized against smallpox, diphtheria, tetanus, polio, and measles (or has had natural measles); or a certificate from a licensed physician stating that such person is not a fit subject for immunization for medical reasons; or a certificate signed by the parent or guardian stating that such immunizations are contrary to his beliefs.

Whenever possible, the evidence for completing the specified immunizations should be a certificate signed by a licensed physician. However, in the circumstances where the physician's records are lost or are not available or where the prospective pupil was immunized in a special public health clinic in which no permanent record of immunization was established, the signed statement of the prospective pupil's parent or guardian attesting to completion of the specified immunizations will suffice as evidence.

In the circumstance where the person cannot supply evidence for one or more of the required immunizations such person shall provide the administrative head of the school with evidence of having obtained the lacking immunization(s) within one year of the date of first entrance.

Rules and regulations of the Rhode Island Department of Health pertaining to the control of communicable diseases shall obtain. Regulations of the local school physician shall obtain in the matters of exclusion and readmission of pupils for reasons of illness. Reports shall be submitted to

the Commissioner of Education in such manner and form as he shall require from time to time.

All full or part-time school employees and those persons (such as food handlers, bus drivers, physicians, nurses, clinicians, etc.) whose duties bring them into direct contact with children shall prior to employment and every two years thereafter, file with the superintendent of schools or a person or persons delegated by him a report from a licensed physician that such person is free from tuberculosis in its communicable form. Such a report shall be based on a chest x-ray taken not more than six months prior thereto or on the result of an intra-dermal tuberculin test taken not more than six months prior thereto. If the tuberculin test is positive, then the report shall be accompanied by a report of the chest x-ray of said person.

Regulation XI

Notification of Parents

Parents or guardians shall be notified, according to acceptable school procedures, of any suspected deviation from normal health found as a result of a screening test (e.g. vision), health examination and/or teacher observation.

Regulation XII

First Aid and Emergencies

Each school shall have written policies and standing orders available in the event of accidents and acute illnesses. These shall be prepared, dated, signed and reviewed annually by the school physician(s).

At least one person, other than the school nurse, competently trained in first aid shall be available in each school at all times.

An accident report shall be completed and filed as soon as possible by the school principal or a person delegated by him.

SECTION III

SCHOOL HEALTH ENVIRONMENT

Regulation I

General

Plans and specifications as they relate to the health and safety of school children and school personnel, for the erection of new school buildings, public and non-public, and for the additions and alterations to existing buildings, shall be submitted to the State Department of Education for review and approval. No contract for the construction of any such building, additions, or alterations, shall be entered into until the plans and specifications therefore have been approved, in writing, by the State Department of Education.

Regulation II

Water Supply

(a) Each school shall have an adequate and safe water supply protected from contami-

nation at the source and throughout the distribution system.

- (b) A public water supply system shall be used as the source of supply where a public water supply is available within a reasonable distance.
- (c) All proposed individual school water supplies shall be approved by the State Department of Health prior to development.

Regulation III

Waste Disposal

- (a) Sewage from all schools shall be discharged into a municipal sewer system where a municipal sewer system is available within a reasonable distance.
- (b) Plans and specifications for all proposed individual sewage disposal systems or major modifications to existing systems shall be approved by the State Department of Health prior to construction.
- (c) An efficient sanitary system for the collection, storage, and disposal of all solid waste materials originating on the school premises shall be provided.

Regulation IV

Method of Dispensing Drinking Water

A sufficient number of conveniently located drinking fountains shall be provided. They shall be located, designed, and installed so as to be in accord with acceptable standards and shall be available for use at all times.

Regulation V

Food Sanitation

- (a) Whenever food is served in schools the facilities provided and procedures employed shall conform with the "Regulations Pertaining To Food Establishments" of the State Department of Health.
- (b) All food service personnel shall, prior to employment, have physical and laboratory examinations such as required by the Division of Personnel of the State Department of Administration, and annually thereafter as required by the State Department of Education.

Regulation VI

Handwashing Facilities

- (a) Lavatories shall be provided in appropriate locations and shall conform in design and number with acceptable standards. They shall be available for use at all times.
- (b) Soap shall be provided in dispensers located within easy reach and shall be available for use at all times.
- (c) Paper towels shall be provided for individual use and shall be available at all times. Air blowers shall be considered an acceptable substitute for paper toweling but these

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shall also be provided in adequate numbers and shall be available for use at all times.

Regulation VII

Toilet Facilities

Water closets and urinals shall be adequate in number, designed and installed in accordance with acceptable standards. The toilet facilities in which such water closets and urinals are contained shall be properly stocked at all times. These water closets and urinals shall be available for use at all times.

Regulation VIII

Heating and Ventilation

- (a) The heating and ventilating system shall be capable of maintaining a comfortable room temperature.
- (b) All rooms shall be free of objectionable drafts.
- (c) Each room shall have a properly located thermometer.

Regulation IX

Lighting

Levels of illumination and brightness ratios shall be in accordance with acceptable standards for the various areas of activity.

Regulation X

Classroom Space and Seating

Classroom space and seating shall be in conformance with acceptable standards.

Regulation XI

Playgrounds

- (a) The playground shall be reasonably level, well drained, and free of obstructions.
- (b) Playground equipment shall be located away from free activity games and shall be kept in good repair.

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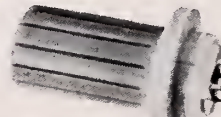
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SUBJECT INDEX

	Page		Page
ADELSON, Samuel, Lecture	611	Thymus (Ciba)	52
ADOLESCENTS, Attempted Suicide	449	Variety of Men (Snow)	408
AMERICAN Medical Association		What You Can Do About Cancer (Maroon)	256
Board of Trustees, Liability Report	459	BRAIN, Russell	225
Council on Medical Service, Peer Review Report	490	BREAST Cancer, Hormonal Therapy	570
House of Delegates	32, 418	BUCHWALD's Wishes for the New Year	207
Heart Transplantation Statement	349	BUFFUM, William P.	573
ANEMIA, Hemolytic, Nonspherocytic	149	BURGESS, Alex M., Oration	81, 563
ANEMIA, Pernicious, Autoimmunity	145	CALCIUM Metabolism	218
APPENDIX, Diverticulosis-Diverticulitis	443	CAPGRAS Syndrome	452
APPROACH to the Problem of Obesity	28	CEREBRAL Vascular Disease, Therapy	384
ATHLETICS, Diet	325	CEREBROVASCULAR Complications, Heart Disease	154
AUTOIMMUNITY, Pernicious Anemia	145	CHILD Health	391
BIOLOGICAL Lesson	207	CHILDREN, Disadvantaged, School Problems	215
BITS and Pieces of Medicine	88	CIGARETTE Smoking, Pilot Program	36
BOOK Reviews		CLINICAL Commandments	371
Alcohol and the Impaired Driver (A.M.A.)	351	CLINICAL Diabetes Association, Program	74
Andromeda Strain (Crichton)	641	COLEMAN Report	558
Anesthesia for Infants and Children (Gross)	256	COLLEGE Dropouts	209
Arrowsmith (Lewis)	112	COLLEGE Students, Problems	211, 212
Atlas of Ear Surgery (Saunders, Paparella)	204	COMMENTARY	115
Balkan Nephropathy (Ciba)	468	COMMUNICABLE Disease Newsletter	43
(Todd-Sanford) Clinical Diagnosis by Laboratory Methods (Davidsohn, Henry)	406	COMMUNITY Organization, Medical Care	317
Clinical Judgment (Feinstein)	164	CONGENITAL Nonspherocytic Hemolytic Anemia	149
Collateral Circulation in Clinical Surgery (Strandness)	406	CONSENT	138
Conflict in Society (Ciba)	196	"CONSTANT Circle," Mencken, deKruif, Lewis	112
Correction	369	CONTROVERSIAL Document	558
Constant Circle (Mayfield)	112	CORDOTOMY, Cervical	616
Current Therapy 1969 (Conn)	284	CURRICULUM, Psychiatry in	563
Cystic Fibrosis (Ciba)	54	DECLINING Role of Surgery in TB	442
Diabetes Mellitus (Danowski, Hamwi, eds.)	203	DEKRUIF, Paul	112
Diagnosis and Management of Pain Syndromes (Finneson)	587	DELIRIUM Tremens	320
Endocrinology of the Testis (Ciba)	468	DEFINITIONS	124
Evolution of Preventive Medicine in the United States Army (Bayne-Jones)	643	DERMAQUIZ	15, 73, 135, 206, 547, 601, 653
Genetics and Counseling in Medical Practice (Reisman, Matheny, Jr.)	643	DIABETES Mellitus, Insulin Resistance	266
Handbook of Pediatric Medical Emergencies (Varga)	408	DIABETES Mellitus, Proinsulin, Insulin	263
The Huxleys (Clark)	197	DIETS in Athletics	325
Internal Medicine (Talso, Remenchik, eds.)	53	DISCS, Herniated	523
Manual of Simple Burial (Morgan)	204	DISEASES, Evolution, Surgeon's Role	611
Medical Pharmacology (Goth)	203	DIVERTICULOSIS-Diverticulitis of Appendix	443
Mentally Abnormal Offender (Ciba)	204	DOES Diabetes Begin With Insulin Resistance?	266
Naked Ape (Morris)	54	DOTTERER, Charles S. (Photo)	331
Le Porfirie (Carlson, Forti)	587	EARLOBE Grafts, Nasal Defects	674
Practical Urology (Winter)	587	EDALOGY	47, 118, 238, 358, 469, 532
Revolution in Medicine (Greenberg)	97	EDITORIALS	
La Scintigrafia dei Tumori (Bruscaignin)	587	Acute Obstructive Suppurative Cholangitis	517
Side of the Angels (Wilson)	52	Adequacy of Psychiatric Treatment	393
Sleep of Reason (Snow)	693	Adjuvant Chemotherapy, Surgery of Breast Cancer	284
Spare-Part Surgery (Longmore)	204	AMCAS	515
Specificity of Serological Reactions (Landsteiner)	41	Asthmatic Deaths	455
Sweeping Wind (de Kruif)	112	Chemical Biology of Pituitary Hormones	39
Textbook of Pediatrics (Nelson et al., eds.)	696	Chiropractors and X-ray Exposure	516
		Close Ties	685
		Communication — Key to Health?	628
		Dartmouth M.D.	100
		Death of the CPC	163
		Diabetes: Theory and Practice	283
		Drug Abuse in Rhode Island	457

AUTHOR INDEX

	Page		Page
ALBALA, Maurice M.....	143, 149	LIANG, Daniel S. F.....	468
BARRETT, Michael S.....	221	LITCHMAN, Henry M.....	34, 272
BAUMGARTNER, Leona.....	88, 94	LITTLE, Robert C.....	380
BECK, Irving A.....	54	MACDONALD, William J.....	159
BRAY, George A.....	28	MARTIN, Horace F.....	406
BROWNLIE, William D.....	46	MATHIEU, Peter L., Jr.....	115
BUESSELER, John A.....	322	MAYNARD, Jean M.....	643
BURGESS, Alex M., Jr.....	437	MCCANN, B. Cairbre.....	23
BURGESS, Alex M., Sr.....	98	NAVACH, Joseph.....	218
BYRNE, Patrick S.....	495	NEMIAH, John C.....	563
CALDER, Harold G.....	42, 54, 101, 227, 282, 543, 696	NICOTRA, Mario.....	452
CAMERON, Edward S.....	570	NIRK, Gunnar.....	215
CANNON, Joseph E.....	588	PAUL, Stephen.....	523
CAVE, Vernal G.....	519	PORTER, Arnold.....	280
CHAPMAN, Carleton B.....	94	QUESNEL, Ernest J.....	320
COOPER, Donald L.....	445	RANDALL, Henry T.....	221
CUNNINGHAM, John J.....	317	RONCHESE, Francesco.....	15, 73, 135, 206, 294, 389, 547, 601, 653
CUSHING, Harvey.....	667	SADLER, Muriel.....	36, 192
DEJONG, Helen E.....	677	SAKLAD, Elihu.....	256
DURANT, Will and Ariel.....	207	SALTZMAN, Abraham.....	203
DYKEN, Mark L.....	384	SAN Souci, Sister Mary Augustine.....	393
EBERT, Robert H.....	81	SARGENT, Francis B.....	240
FAIN, John N.....	263	SAVASTANO, A. A.....	218, 325
FANGER, Herbert.....	406	SCHULMAN, Stephen A.....	483, 551
FARLEY, John E.....	143	SENSEMAN, Laurence A.....	204, 351, 449
FARNSWORTH, Dana L.....	209	SETTIPANE, Guy A.....	682
FARRELL, John E.....	240	SIMEONE, F. A.....	408, 611
GILBERT, Mary Lou.....	628	SIMON, Stanley D.....	329
GOLDOWSKY, Seebert J.....	418	SLEICHER, Sally.....	204
GRADY, John P.....	408	SOLWAY, Sydney A.....	406
GRENDA, Albin N.....	442	SONIS, Meyer.....	391
GURLAND, Jerome S.....	206	SONKIN, Nathan.....	441
HACKMAN, Edmund T.....	418	SRIRATANABAN, Amnach.....	143
HEDGE, K. Kushala.....	500	STURIM, Howard S.....	674
HILL, Charles L.....	429, 458	TAFT, Edwin G.....	149
HOUSTON, Gilbert.....	211	TAMVAKOPOULOS, Spyros K.....	221, 443
HUNT, William E.....	523	TETREAULT, Albert F.....	204
IANNUCILLI, Edward A.....	145	THAYER, Walter R.....	145
JENCKS, Christopher.....	558	TIERNEY, John T.....	437
JOHNSON, Roswell D.....	212	TURCO, S. J. P.....	325
KARAS, Joseph S.....	505	TURNIER, Edgard.....	221
KARKALAS, Yani.....	452	TYLER, H. Richard.....	154
KIPNIS, David M.....	266	WELT, Louis G.....	110
KLINEFELTER, H. F.....	371	WILLOUGHBY, Alan.....	320
LATHROP, John C.....	192	WORTIS, S. B.....	371
LEKAS, Mary D.....	204	YASHAR, James J.....	375
LENNON, Joseph L.....	553	YASHAR, John.....	375
LEWIS, Robert V.....	41, 52, 53, 112, 164, 203, 224, 388, 408, 433, 574, 643, 693	YOUNG, Raymond M.....	406
LEY, Herbert L., Jr.....	687	ZUCKER, Joseph M.....	197, 369



SUBJECT INDEX

	Page
Education for General Practice	513
Epidemiology of Sporadic Measles in Rhode Island	42
Essential Facts in the Attack on Environmental Pollution	43
Family Medicine:	229
Fashions in Medicine	571
Future of the Charles V. Chapin Hospital	101
Granulocyte and Lysosome	337
Harvey Cushing, M.D., 1869-1939	685
Hepatitis Precautions	514
Histocompatibility Typing Center	572
Hope in India	100
Interferon	629
Inter-Industry Aerosol Committee	628
Is Nursing Relevant?	393
Landsteiner Centennial	41
Length of Stay in Teaching Hospitals	627
Lingual Tonsillitis	458
Magnetic Crystals	627
Malnutrition and Pregnancy Outcome	41
Marijuana	337
Medical Writing	394
New Medicaid Regulation	516
New Program of Postgraduate Psychiatric Education	456
New Test for Sick Hemoglobin	39
One Hundred Years Young	338
Overutilization	228
Parasitic Disease Drugs Available at NCDC	395
Pernicious Anemia and Autoimmune Disease	230
Pheromone, Perfume, and Passion	458
Physicians' Assistants	98
Piercing the Ears	281
Poisoning from Shellfish — "The Red Tide"	162
Pollution: An International Problem	282
Pot Boils	571
Proofreader's Prostatitis	513
Providence Community Health Center	456
I. Radioimmunoassay — a New Tool	161
II. Radioimmunoassay — Measurement of Circulating Parathyroid Hormone	161
Restraint	40
Revised Dietary Allowances, 1968	162
"Revolution in Medicine" by Selig Greenberg	97
Rhode Island General Assembly 1969	335
Rhode Island Honored	572
Role of the Pediatrician in Mental Health	227
Role of Sulfonamides	687
SLE	686
Socialized Medicine Italian Style	514
Spiritualism	282
Suggestion for the Task Force	99
Surgical Physiology in Rhode Island	228
Synthesis of an Enzyme	456
Teenage Smoking	40
There Must be a Better Way	455
"This Relic of Barbarism"	281
Treasures	572

	Page
Undone by Under-Done Meat	395
Urokinase for Pulmonary Embolism	688
Vanishing Art	457
Viet Nam Volunteers	515
Weights and Measures	227
Wouldn't It Be Wonderful?	395
EDITOR'S Mailbox	192, 369, 429
EDUCATION, Medical	110
EDUCATION, Medical, International	495
ELECTIVE Surgical Patient	429
EMERGENCY Medical Services, R.I.	505
ENTERITIS, Regional	221
ENVIRONMENT-Heridity Controversy	553
FARRELL, John E., (Photo)	333
FITNESS, What Is?	445
FLURANDRENOLONE Tape Therapy	389
GENIUS, Some Reflections	225
GOLDOWSKY, Seebert J. (Photo)	333
GRADY, John P. (Photo)	333
CUAM, Neurological Diseases	223
HACKMAN, Edmund T. (Photo)	333
HEALTH Cost Effectiveness Amendments	663
HEALTH Manpower, Rhode Island	644
HEALTH and Welfare Legislation, R.I.	363
HEART Disease, Cerebrovascular Complications	154
HEART Patients, Federal Grant	294
HEART Sound, First, Importance	380
HEART Surgery, Simplified Technique	375
HEART Transplantation, Statement	349
HEREDITY-Environment Controversy	553
HERNIATED Discs	523
HODGKIN, Thomas, and Moses Montefiore	619
HORMONAL Therapy in Breast Cancer	570
HOSPITAL Admissions, Statistics	33
HOSPITAL, Teaching, and Community	81
HOYE, Stephen J. (Photo)	332
IMMUNOLOGY, S.L.E.	682
IMPORTANCE of First Heart Sound	380
INSULIN Resistance and Diabetes	266
LET'S Not Wait	159
LEWIS, Sinclair	112
LIABILITY, Medical Professional	459
LIBRARY, Rhode Island Medical Society	677
LITTLE Fresh Air	184
MANAGEMENT of Delirium Tremens	320
MASTERS in Medicine	574, 619, 667
MEASLES	42
MEDICAL Care in Rhode Island	317
MEDICAL Crises (Editor's Mailbox)	429
MEDICAL Education, International	495
MEDICAL Education: Preparation for Tomorrow	110
MEDICAL Profession and Peer Review	490
MEDICARE Administrative Alternatives	322
MEDICINE, 21st Century	183
MEDICOLEGAL Symposium, 1969	240
MENCKEN, H.L.	112
MILITARY Patients, Payment	141
MONONUCLEOSIS, Infectious, and Thrombocytopenic Purpura	143

S U B J E C T I N D E X

	Page		Page
MONTEFIORE, Moses, and Thomas Hodgkin	619	Officers and Standing Committees	334
NASAL Defects, Earlobe Grafts	674	President's Address (Outgoing)	317
NEANIOLOGY	518	President's Message (Incoming)	329
NECROLOGY, 1968	48	RHODE Island Medical Society Physicians Service	
NUTRITIONAL Implications of Regional Enteritis	221	Annual Meeting, 20th	286
OBEESITY Problem	28	Annual Report	280
OBEESITY, Proinsulin, Insulin, Diabetes	263	Officers	261
ONE Sentence Essay	15, 33, 117, 206, 207, 223, 225, 271, 293, 440, 448, 469, 527, 551, 681, 688	RHODE Island Physicians' Smoking Habits	437
OPEN Heart Surgery, Simplified Technique	375	ROENTGEN Riddle	483, 551
ORAHESIVE,® Plantar Verruca Surgery	680	RUBELLA Vaccine Recommendations	622
OSTEOPATHS and Doctors of Medicine	623	SCANNING the Medical Literature	45, 700
OUR Prize Possessions	677	SCHOOL Health Program, Rhode Island	697
PAMA Post Cited	688	SCHOOL Problems, Disadvantaged Children	215
PEDIATRICIAN, Solo	115	SEXTON, Richard P. (Photo)	331
PEER Review, AMA Report	490	SIMON, Stanley D. (Photo)	328
PERCUTANEOUS Radio Frequency Cervical Cordotomy	616	S.L.E.: Model for Study of Immunology	682
PERIPATETICS	17, 75, 124, 244, 352, 369, 652	SMOKE Signals	573
PHYSICAL Measurements at Age 22 and 94	388	SMOKING, Physicians' Habits	437
PHYSICIANS, Requirements, Department of Labor	226	So What is New?	56
PHYSICIAN and the Surgeon	667	SOCIAL Security, What Price?	372
PHYSICIANS, statistics	644	SOLO Pediatrician	115
PILOT Program, Cigarette Smoking	36	STUDENTS	209, 211, 212, 215
PLANTAR Verruca, Orahesive®	680	SUICIDE, Adolescents	449
POSTGRADUATE Medical Education, Quality Medical Care	317	SURGEON and the Physician	667
POST-STROKE Rehabilitation	23	SURGEON'S Role, Evolution of Diseases	611
PRIZE Possessions	677	SURGICAL Consent Form	138
PROGRESS NOTES	28, 145, 218, 384, 682	TEACHING Hospital and Community	81
PROINSULIN, Insulin, Obesity, Diabetes	263	TEN Clinical Commandments	371
PROVIDENCE Medical Association		THROUGH the Microscope	231, 290, 353, 399, 464, 474, 580, 600, 654
Minutes	9, 126, 608	THYROID Crisis in a County Hospital	500
President's Address	159, 251	Two Sentence Essay	206, 359, 440, 468, 530, 573
PSYCHIATRY in Changing Curriculum	563	TRI-STATE Regional Medical Program	94
PURPURA, Thrombocytopenic, and Mononucleosis	143	TUBERCULOSIS, Pulmonary, Declining Role of Surgery	442
RATNER Award Given Doctor Buffum	573	U.S. Department of Labor, Wage and Labor Standards	226
RAUWOLF, Leonhard	574	URINE, Color Changes	441
REAPPRAISAL, Controversial Document	558	VENEREAL Disease	519
REHABILITATION, Post-Stroke	23	VITAL Statistics	588
RETIREMENT Program, New England Medical Societies	46	WASHINGTON County Medical Society	
RHODE Island Dermatological Society	15	Minutes	16, 251
RHODE Island General Assembly		WASHINGTON Scene	64, 136, 252, 434, 542, 594
Editorial	335	WERE You There?	93
Health and Welfare Legislation	363	WHAT Is Fitness?	445
RHODE Island Hospital, Pediatric Department	15	WHAT Price Social Security?	372
RHODE Island Medical Journal Cited	354	WHAT's New In Venereal Disease?	519
RHODE Island Medical Society		WHERE Do We Go? How Do We Get There?	391
General Meeting, May 7	330	WOMAN's Auxiliary	
House of Delegates	166, 301, 631	Award	440
Heart Transplantation Statement	349	WOONSOCKET District Medical Society	
Osteopathy Statement	623	Minutes	8, 348
Necrology, 1968	48	WORKMEN's Compensation Medicine	34, 272

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